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Production Research Report No. 33

Approaches to Income Improvement in Agriculture



Experiences of Families Receiving Production Loans Under the Farmers Home Administration

Agricultural Research Service
UNITED STATES DEPARTMENT OF AGRICULTURE

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PREFACE

Relatively low incomes have been a persistent feature of large parts of American agriculture for many decades. The Nation's oldest and largest farm program directed specifically toward ameliorating these conditions consists of its supervised farm credit program carried on by the Farmers Home Administration and its predecessor agencies.

This program is predicated on the assumption that many of the Nation's low-income farmers, if they are provided the credit funds and technical assistance needed for efficient farm operations, will soon become productive farmers able to continue efficient operations while relying wholly upon private and cooperative credit sources.

The study reported here is directed toward an examination of the nature, causes, and possible solutions of the low-income farm problem generally. For this purpose, lessons derivable from the experiences of farmers receiving assistance under the Operating Loan Division of the Farmers Home Administration in the years 1947 through 1953 were used. The study was made possible through the cooperation of the Farmers Home Administration in providing access to records on the operations of its borrowers. It is not designed, however, to provide an evaluation of the Farmers Home Administration program; it merely draws upon the operations of farmers assisted by the FHA program to evaluate a variety of ideas as to the nature and possible solutions of the low-income farm problem as it still exists on many of the Nation's farms.

In particular, it is hoped that the results of this research study will be of assistance to those concerned with the national Rural Development Program.

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Issued August 1959

APPROACHES TO INCOME IMPROVEMENT IN AGRICULTURE

Experiences of Families Receiving Production Loans Under the Farmers Home Administration

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SUMMARY

How and under what conditions can relatively low-income farm families improve their incomes and increase their farming resources? The study reported here was intended as an analysis of this question. The basis for the evaluations was provided by the experiences of 5,555 formerly low-income farmers who received operating loans during the years 1947-53 from the Farmers Home Administration, the major farm agency designed specifically to assist low-income farmers.

Approaches to the income and resource problems observed in the study reported were limited to things done on individual farms. The patterns and stages of economic development of the localities in which the families lived therefore affected greatly their rates of progress.

In State economic areas in which the median income of all farm families in 1949, as reported by the census, was less than \$1,000, the FHA families increased their incomes while under the FHA program by an average of \$448 in the North, \$828 in the West, and \$397 in the South. In areas in which the median income of all farm families was \$2,000 or more, families in the sample increased their incomes while under the FHA program by about \$1,300 in the North, about \$1,750 in the West, and \$1,431 in the South.

When living within as poor a locality, measured by the median income of all farm families, families in the North made no greater progress than did those in the South. These differences among areas make it appear that the low-income farm problem is only partly one that is likely to be solved through adjustments by individual farmers, even with such help as the FHA provides. The solution of the problem will turn also upon such things as development of industry, shifts in population, new farm inventions and discoveries, growth of markets, and improvements in education, communication, and transportation.

Nonetheless, individual plans, attributes, and resources, as well as the general economic environment, underlie the income and progress differentials observed in the study.

Among families in the sample, however, there was no consistent pattern of relationships between the gains they made in their incomes and net worth and their initial net

worth, the number of acres of land they had previously operated, or their previous size of farm as measured by value of sales.

In general, the younger farm operators made the larger incomes and the greater increases in their incomes and net worth while under the FHA program.

The resources commanded while under the FHA program, not those owned or used formerly, was the crucial factor in the incomes and progress of families in the sample for the time period studied.

Differences in incomes and progress associated with differences in number of acres of land per farm, however, were relatively small. This suggests that other factors are more important than land in increasing income.

In the South, where cash-crop farming predominates, each additional acre of cropland over 25 acres per farm up to 300 acres was associated with an average increase in income from farm sources of about \$8. Part of this increment, however, should be ascribed to nonland capital.

When families were grouped by value of working capital (livestock, machinery, feed, seed and other supplies, and cash reserves), each \$1,000 increase over a range from \$1,000 to \$10,000, was associated with an average increase in income of about \$350 in both the South and the North and of about \$400 in the West. When they had the same amounts of working capital, families in the North and those in the South earned about the same incomes.

The amount of credit funds advanced by the Farmers Home Administration affected the amount of working capital, incomes, and rates of progress while the families were under the FHA program. For each \$1,000 increase in credit funds advanced, over a range from \$500 to \$7,500, income was increased by an average of about \$320 in the South, \$260 in the North, and \$500 in the West. Among the families studied, operator labor and management earnings of as much as \$2,500 were associated with operating-loan advances of \$5,000 and over in the South, \$4,000 and over in the North, and \$2,000 and over in the West. This indicates that more credit funds are required in the South to lift family income or operator earnings of the average family assisted under

the FHA program to any given level than are required in the North or West.

Neither incomes nor rates of progress differed greatly by tenure of farms. They differed less in the South than in the North and the West.

Sizable differences in incomes and rates of progress were observed as between white and nonwhite families in the South. But when white operators between the ages of 30 and 49 were compared with nonwhite operators of the same age and tenure and with the same amounts of farm resources and off-farm income, the latter ordinarily made as much progress while on the FHA program and had as high incomes at the end of their FHA tenure as did the whites.

Incomes and progress potentials vary not only with variations in quantity and quality of resources but also according to the ways in which resources are used. Families in the North and West whose receipts from livestock were low had about as high incomes as did those reporting large livestock receipts. In the South, however, income per family in 1953 increased from \$1,945 for those with livestock receipts of less than \$1,000 to \$3,934 for those with livestock receipts of \$3,000 and over. These differences resulted more from the effects of size of the livestock enterprise on size of the farm business than from the superiority of livestock over crop enterprises per acre of land used.

Of the families in the study sample, 48 percent supplemented their incomes from farming with income from nonfarm sources, mainly nonfarm work. For farm families without enough farm resources to provide reasonably full employment, work off the farm helped to increase employment and incomes. However, those who depended mainly on farming for income had higher incomes than did those who combined farming with relatively low-paying nonfarm work. Those who combined farming with relatively good nonfarm jobs (those returning earnings of \$1,000 or more) had larger incomes than did the full-time farmers. When income from nonfarm sources was less than \$1,000, the combination of farming and nonfarm employment usually meant low-quality farming and low-quality nonfarm work. This combination yields a larger income than either alone but not as large an income as does farming with reasonably adequate resources or as does full-time nonfarm work at average wages for semiskilled workers.

The incomes they earn are both the ends for which farmers work and use their resources and the means by which they can effectively increase their income-earning capacity. Efficiency in the latter objective is achieved when farmers receive for the use of their labor and management ability returns comparable to those they could earn in other types or ways of farming or in other kinds of employment. For farmers without major occupational disabilities and in the prime of their work life, a money return for labor and management of \$2,500 is not above earnings of many semiskilled workers in industrial employment.

In all three regions, families with incomes of \$3,000 to \$3,999 from all sources had average incomes of \$3,428 to \$3,472. When these incomes were adjusted for capital costs and for labor contributed by members of the family other than the operator, they yielded earnings to the farm operators for their labor and management that approximated \$2,500. In obtaining these operator earnings, the families used farming resources with estimated values of about \$15,000 in the South, \$20,000 in the North, and \$25,000 in the West.

In the South, a \$2,500 return to the farm operator's labor and management is the minimum that will provide as much as \$1,800 a year for cash family living expenses, yet leave enough income to enable a family beginning with relatively few resources of its own to achieve debt-free ownership of the farm resources it uses, even under FHA credit terms. Because of the higher capital requirements, families in the North and West need somewhat larger operator earnings to achieve these goals. Application of the findings of the study to credit needs points up the difficulty of the first few years in farming for the family that relies heavily upon credit to acquire both its farm and much of the operating capital it needs. In the past, the variable payment plan applicable to ownership loans helped many beginning farmers over this hump.

The larger resource requirements for operator earnings of \$2,500 in the North and West suggest that, percentagewise, farmers in these regions need a higher equity in their agricultural resources than do farmers in the South.

FHA reports indicate that borrowers leaving the program in 1958 had made more progress than did those in the sample used for this study. However, it is believed that the relationships found in this study would be equally applicable to the period since 1953 had later data been available for analysis.

INTRODUCTION

This publication is concerned with ways in which low-income families in American agriculture can increase their incomes and build up their capital resources with the assistance now available from public and private agencies. The research on which the report is based was directed specifically to the following questions:

- (1) When able to command additional capital resources at usual market rates, can low-income farm families increase their incomes and the resources they own?
- (2) What are some of the kinds of farm changes that offer promise of helping them to achieve these objectives?
- (3) In what kinds of farming areas or under what kind of conditions are such improvements most easily made?
- (4) What implications do the answers to these questions have for policies and programs directed to the low-income farm problem?

Increasing the incomes of and building up the capital resources owned by farm families are related objectives. One contributes to the other, but only over time as a single production period is exceeded. To maximize its income, a farm family must have adequate land and other capital resources, and it must possess a reasonably good knowledge of its farming alternatives. In addition, the family must have enough faith in its ability to maximize its income to attempt to do so. How much a family can increase its resources depends upon the size of its income. Use of credit enables farmers to bridge time and to increase their incomes and the possible rate of capital accumulation. But there is no mechanistic relationship between the size of a family's income and its savings. Rather, regardless of the amount of income it has, putting part of the income into the building of its capital resources to increase income in the future is a matter of choice. The choice is dictated by the family's goals and by its knowledge of and its faith in the possibility of achieving them.

These considerations are important in increasing incomes and building up resources. The extent to which they have been operative is also important in judging how well past farming experiences serve as evidence on the problems of the study reported. Therefore, these considerations are important directives in choosing a factual basis for inquiry into the problems analyzed in the study. In light of the considerations listed and in view of the availability on a nationwide basis of data, both on farm operations and on spending and savings over time, the experiences chosen as the main factual basis of the study reported are those of 5,555 farm families who have received financial and technical assistance under the farm operating loan division of the Farmers

Home Administration.¹ The sample was drawn from the first five borrowers in each local FHA county or area office in the United States who (a) entered the program from 1947 to 1953 inclusive, and who (b) paid their loans in full after the 1953 harvest and were still farming in 1954. It includes a 50-percent random sample from farmers in this group stratified on a State basis.²

Each State and all except a few State economic areas are represented in the sample of families whose farming and household operations provided the main factual basis of the study. These families are most heavily concentrated in the South and the Midwest (fig. 1).

Most of the data for the study reported were obtained from administrative records of the Farmers Home Administration. These records provide for each of these families data on their resource characteristics, farming patterns, receipts and expenses, family living costs, tenure, and other items for the year before entry into the FHA program and for 1953.

Before they obtained FHA loans, with few exceptions, these families had relatively low incomes and little capital. They experienced the usual vagaries of weather, sickness, accidents, mistakes in management, and other unpredictable factors that affect incomes and needs for income.

The Farmers Home Administration, functioning as an agency of economic development, has helped these families to increase the quantity and improve the quality of their available resources including technical knowledge. This assistance has made a difference in size of farm, kinds and combinations of enterprises, and production and marketing practices. Except for differences in interest rates and in costs of obtaining technical counsel, however, the Farmers Home Administration has not affected the basic physical and price relationships applicable to farming. Hence, if other farmers had carried on their farming operations in the same way, using the same quality and quantity of land, labor and capital, and the same practices, their results should not have differed essentially, even though they depended on commercial and cooperative sources of credit. For this reason, the findings of the study reported, when used with recognition of the effects of supervisory assistance on kinds and methods of farming, provide as good a basis for evaluating the policies and programs of other credit agencies as they do for evaluating the policies of the Farmers Home Administration.

¹ Unless otherwise indicated, all references to "farms" and to "farm families," in both tables and text, are to those in the study sample.

² The methods by which the FHA selects its borrowers are briefly described in the section entitled "Lending and Supervisory Practices of the Farmers Home Administration."

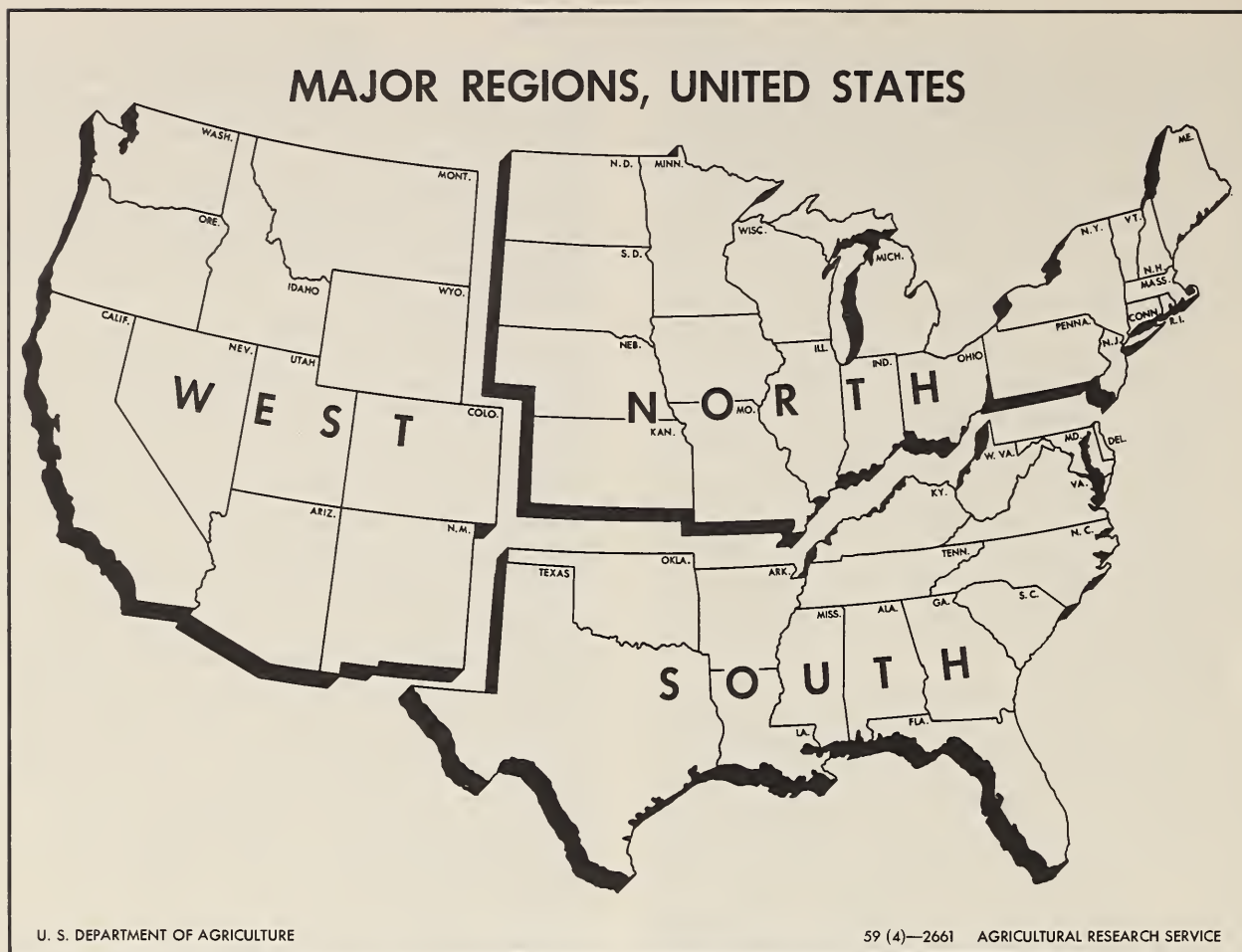


FIGURE 1.--For purposes of the study reported, borrowers in the study sample were grouped on this regional basis.

The findings of the study, however, bear only upon the needs for credit of low-income farmers, or the demand aspects of the problem of financing low-income farmers. They do not bear upon the supply of loan funds for farm financing, which is equally as important as the demand for these funds in evaluating the policies of farm credit agencies including the Farmers Home Administration. Furthermore,

the study reported was directed toward an evaluation not of the Farmers Home Administration, but of the operations of families in the study sample as possible ways of solving the income and resource problems of the Nation's many low-income farm families whom neither the Farmers Home Administration nor any other agricultural agency has had the facilities to reach.

THE FAMILIES BEFORE ENTERING THE FHA PROGRAM

Personal Characteristics

Age of family head

Nearly 80 percent of the 5,555 farm operators in the sample studied were less than 50 years of age when they applied for their farm operating loans (table 1). Only 2 percent were 65 years of age or over; nearly 60 percent were under 40; and around 25 percent were under 30. Hence, they were predominately young men with a good probability of several work years left in which to achieve their income and resource objectives. This was especially true of borrowers in the North, where 75 percent were under 40 when they applied for their FHA loans. In the South, however, only 47 percent of the borrowers were under 40 and 28 percent were 50 or older. These differences reflect partly differences among regions in the age composition of farmers generally. They also arise partly from the demands on the FHA for assistance by the South's large number of relatively low-income farm people, many of whom, because of advanced age, physical condition, or limited education, may be unable to improve to any great extent the

size of their farms or the kinds and methods of farming they carry on.

Veteran status

The large percentage of relatively young operators assisted by the Farmers Home Administration results partly from the general policy of giving special preference to veterans in the selection of borrowers. In the United States as a whole, 46 percent of the borrowers were veterans (table 1). The proportion ranged from 39 percent in the South to 56 percent in the North. Besides being generally younger than the nonveterans in the sample, a factor that is often considered important in accounting for differences in income, many of these veterans received considerable financial assistance and technical training in agriculture under the veterans' on-the-job training program. To the extent that this assistance has been of value, it helps to account for differences in the rates of progress made, not only between individual borrowers but also among regions.

TABLE 1.--Number and percentage distribution of borrowers, by age, race, and veteran status, major regions and United States, 1953

Item	North	West	South	United States
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Number of borrowers.....	1,832	615	3,108	5,555
Distribution of borrowers by--				
Age: ¹	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Less than 30 years.....	37.2	26.6	15.8	24.0
30 to 39 years.....	38.0	34.4	30.8	33.6
40 to 49 years.....	15.8	16.3	25.6	21.3
50 to 64 years.....	8.3	20.4	25.2	19.1
65 years and over.....	.7	2.3	2.6	2.0
Total.....	100.0	100.0	100.0	100.0
Race:				
White.....	99.3	99.0	77.1	86.8
Nonwhite.....	.7	1.0	22.9	13.2
Total.....	100.0	100.0	100.0	100.0
Veteran status:				
Veterans.....	56.2	55.4	38.8	46.4
Nonveterans.....	43.8	44.6	61.2	53.6
Total.....	100.0	100.0	100.0	100.0

¹ Age reported at time of loan applications.

Race

Of families in the study sample, 86.8 percent were white and 13.2 percent were nonwhite (table 1). This compares with the 10.8 percent of nonwhite families among all farm-operator families in the Nation. Of the nonwhites, 98 percent lived in the South. There, nonwhites accounted for 22.9 percent of all borrowers in the sample. They comprised 21.1 percent of all farm-operator families in the South's general farm population.

Size of family

Families in the study sample averaged 4.4 persons. The average in the South was 4.6, in the North 4.2, and in the West 4.0. Data available do not permit classification of the families by differences in size and quality of labor force. But the number of workers per family probably differed very little between regions and other major groupings used in the study.

Economic Situation

Assets, debts, and net worth

For the United States as a whole, at the time they applied for loans, the families had farm and household assets worth \$7,863, debts of \$2,411, and a net worth of \$5,452 per family (table 2). Of the property owned, \$3,841 was in farm real estate; \$3,340 was in working capital - machinery, livestock, feeds, seeds and supplies, and cash on hand - and \$682 was in household furnishings. The value of all assets per family for borrowers in the West was about twice the national average. Borrowers in the North, however, had only slightly larger assets than did those in the South. The average net worth of borrowers in the South was higher than that of borrowers in the North.

At the time they applied for loans, the borrower families had considerably less than did

the average farmer in the Nation or in the region in which these families lived. The value of farm assets per farm for all farms in the United States in 1950 was \$25,566. The average value of farmers' equities in these assets was \$23,244. The differences in value of property between FHA borrowers and other farmers were larger in the North and West than in the South, where even the average for all farm families is relatively low.

Incomes

Families in the study sample had an average net cash income before entering the FHA program of \$1,875 per family. This compared with an average in 1949 for all farm-operator families in the United States reported by the Bureau of Agricultural Economics and the Bureau of the Census of \$2,650 (table 3).

TABLE 2.--Average value per borrower of property owned, debts and net worth, at time of loan application, major regions and United States

Item	North	West	South	United States
Assets:	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Land and buildings.....	3,128	7,243	3,550	3,841
Working capital.....	3,513	4,961	2,919	3,340
Cash.....	(226)	(513)	(183)	(234)
Household property.....	665	948	651	682
Total assets.....	7,306	13,152	7,120	7,863
Debts:				
Real estate debts.....	1,633	2,826	1,570	1,729
Other debts.....	936	1,159	440	682
Total debts.....	2,569	3,985	2,010	2,411
Net worth.....	4,737	9,167	5,110	5,452

TABLE 3.--Selected characteristics of borrowers before entry into program, by year of entry, major regions

Region, and year of entry into program	Borrowers	Average value per family				
		Net worth	Cash receipts	Net cash income		Funds available for debt payment ¹
				Farm sources	All sources	
	Number	Dollars	Dollars	Dollars	Dollars	Dollars
North:						
1953.....	105	9,150	6,741	2,068	2,766	1,448
1952.....	211	6,840	5,584	1,738	2,333	1,125
1951.....	305	5,690	3,880	1,354	1,970	896
1950.....	465	4,250	3,039	1,194	1,709	892
1949.....	434	3,810	2,960	1,311	1,875	915
1948.....	160	3,490	2,825	1,210	1,674	788
1947.....	152	2,590	3,172	1,179	1,684	796
Total or average.....	1,832	4,737	3,805	1,411	1,876	972
West:						
1953.....	91	14,670	6,438	2,705	3,640	2,030
1952.....	80	12,300	6,034	2,661	3,524	1,988
1951.....	90	9,220	4,410	1,675	2,503	1,248
1950.....	137	8,390	3,642	1,738	2,343	1,276
1949.....	122	7,200	3,525	1,687	2,276	1,132
1948.....	53	5,800	3,055	1,861	2,347	1,128
1947.....	42	3,620	2,260	966	1,720	802
Total or average.....	615	9,167	4,770	2,018	2,614	1,471
South:						
1953.....	1,016	5,760	3,360	1,557	1,887	1,066
1952.....	456	6,120	3,055	1,426	1,851	1,081
1951.....	610	5,290	2,296	1,070	1,589	883
1950.....	499	4,420	2,118	1,017	1,419	813
1949.....	323	3,850	2,090	1,077	1,459	808
1948.....	105	3,180	1,924	968	1,291	676
1947.....	99	2,430	1,792	972	1,244	652
Total or average.....	3,108	5,110	2,693	1,294	1,684	959
United States.....	5,555	5,452	3,165	1,399	1,875	1,016

¹ This is family's net cash income from all sources minus family's living expenses.

Nearly two-thirds (63.4 percent) had net cash incomes below \$2,000, and 26 percent had less than \$1,000 (table 4). Because incomes in the region are generally small, incomes of FHA borrowers in the South were higher relative to the average general income of the region than were those of FHA borrowers in the North and West.

Income sources

About \$1,400 of the average family's money income before entry into the FHA program came from farm sources; and \$475 came from nonfarm sources (table 3). The nonfarm income

was not broken down by sources. Probably, a relatively large part of it came from payments to veterans made under the on-the-job farm-training programs administered by the Veterans Administration. This source was of relatively short duration; it was not generally available to these families in 1953.

Farm income was derived predominately from the sale of crops, chiefly cotton and tobacco in the South, and wheat in the West (table 5). But in the North, sales of livestock and livestock products accounted for the larger part of farm receipts. These differences reflect general regional differences in kinds of farming.

TABLE 4.--Percentage distribution by size of net cash income, FHA borrowers in year before entry into program and all farm operators in 1949, major regions and United States¹

Net cash income	North		West		South		United States	
	FHA borrowers	All farm operators	FHA borrowers	All farm operators	FHA borrowers	All farm operators	FHA borrowers	All farm operators
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Less than \$1,000	21.6	15.9	12.6	15.2	30.4	41.0	26.4	28.1
\$1,000 to \$1,999	35.3	23.1	27.7	19.0	39.1	27.3	37.0	24.8
\$2,000 to \$2,999	24.2	21.2	24.9	21.0	18.7	14.2	20.7	17.8
\$3,000 and more..	18.9	39.8	34.8	44.8	11.8	17.5	15.9	29.3
All families...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Income reported includes that from both farm and nonfarm sources. Income for all farm operators is that reported in Farms and Farm People, Population, Income, and Housing Characteristics by Economic Class of Farms, a special cooperative report, U. S. Bureau of the Census and U. S. Department of Agriculture, 98 pp., illus., Washington, 1953.

TABLE 5.--Average cash farm receipts of borrowers in year before entry into program, by source, major regions and United States

Source	North	West	South	United States
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Crops.....	1,459	2,675	2,028	1,951
Livestock.....	2,107	1,775	609	1,125
Other.....	239	18	56	89
Total.....	3,805	4,468	2,693	3,165

Previous farm operations

Acreages.--Before entering the FHA program, borrowers who had farmed in the previous year operated farms having an average of 134 acres of total land and 79 acres of cropland (table 6). Size of farms, as measured by total acreage, ranged from 107 acres per farm in the South to 201 acres in the West. In the South and North, the borrowers had operated farms that were not substantially smaller than the average of all farms in their respective regions. But before they entered the FHA program, the borrowers in the West operated

farms that were well below the average size of farms in the region.

Value of output

Measured also by value of farm production for market, families in the study sample had operated farms smaller than those in the general farm population. For the entire sample, the average value of sales was \$3,165 (table 7) compared with an average of \$4,165 in 1949 for all farms in Continental United States. Sales of less than \$2,500 were reported by 53 percent of the borrowers and sales of less than \$5,000 by 83 percent.

TABLE 6.--Average acreage of land per farm operated by FHA borrowers in year before entry into program, compared with average of all farms in 1954, major regions and United States¹

Item	North	West	South	United States
	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>
Cropland:				
FHA farms.....	117	79	56	79
All farms.....	127	157	58	96
All land:				
FHA farms.....	157	201	107	134
All farms.....	180	639	131	195

¹ Average acreage per farm of all farms is that reported in the 1954 Census of Agriculture.

TABLE 7.--Average value of farm sales per borrower and percentage distribution of borrowers by value of sales, year before entry into program, major regions and United States

Item	North	West	South	United States
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Average value of farm sales.....	3,805	4,468	2,693	3,165
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Percentage of farms with sales of:				
Less than \$250.....	6.6	4.2	0.8	2.7
\$250 to \$1,999, and off-farm income:				
Greater than farm sales.....	5.5	4.2	6.6	6.0
Less than farm sales.....	8.0	4.0	16.0	12.7
Total.....	13.5	8.2	22.6	18.7
\$1,200 to \$2,499 and off-farm income:				
Greater than farm sales.....	3.7	3.1	1.7	2.4
Less than farm sales.....	18.8	18.9	35.7	29.5
Total.....	22.5	22.0	37.4	31.9
\$2,500 to \$4,999.....	33.8	33.8	28.1	30.1
\$5,000 to \$9,999.....	20.1	24.3	9.3	13.7
\$10,000 to \$24,999.....	2.9	7.5	1.6	2.6
\$25,000 and more.....	.6	--	.2	.3
Total.....	100.0	100.0	100.0	100.0

GENERAL NATURE OF THE ADJUSTMENTS MADE

Lending and Supervisory Practices of the Farmers Home Administration

As is natural, methods used by families in the study sample to achieve their income and resource objectives reflected the policies and administrative practices of the Operating Loan Division of the Farmers Home Administration. Within limits, these policies and practices varied from State to State and within States from area to area, depending upon the outlook and judgment of local FHA supervisors and their advisory committees.

The FHA operating loan program was designed to assist farm families who are unable to obtain enough credit from private or cooperative credit sources to farm in ways that are consistent with their production potentialities, based on the judgment of well-informed farmers and of professional agricultural workers. To obtain FHA loans, farmers must first file loan applications. Determination of whether or not enough credit is available from other sources and of other eligibility requirements is made for each loan applicant by members of the county FHA advisory committee. To be eligible for a loan, the family must also have access to land on which to operate. Its proposed operations must be of the family type³ and must hold reasonably good promise of enough income to meet farm operating and family living costs and loan repayments.

From 1951 to 1956, the Farmers Home Administration was authorized to extend production loans (that is, loans for equipment, livestock, farm operating expenses, and other annual needs) in amounts up to \$7,000 for from 1 to 7 years at 5 percent interest, but it limited the total indebtedness of any farmer to \$10,000 or less. From 1946 to 1951, it operated with a loan limit of \$3,500 with total indebtedness not to exceed \$5,000. In 1956,

both the loan ceiling and the limit on indebtedness to any one farmer was raised to \$20,000.

The FHA provides its borrowers special technical assistance, first in the development of their farm plans and later in carrying them out. In the planning phase, the local FHA supervisor helps the borrower develop both (1) a long-time plan covering the period required to put needed long-run adjustments into effect, and (2) a plan for the current year's operations.

The annual plan includes production plans for crops and livestock. Expected yields, sales, and expenditures are projected into a budget for the year based on current prices.

The long-run plan is concerned with enterprises and yields that will obtain after enough time has elapsed for benefits of additional capital and technical assistance to be reflected in the farm organization.

For the loan to be approved, both plans must show how the family can earn enough income to meet farm operating expenses, family living costs, and debt retirement, with some allowance made for risk and uncertainty.

The amount of technical assistance provided in carrying out the plan varies widely, depending upon the needs of the borrower and the kinds of farming adjustments attempted. Usually in the first year after a loan is made, FHA supervisory personnel keep in close contact with the borrower through visits to the farm and through office visits by the borrower. After the first year, if the borrower is making satisfactory progress in the repayment of his loan and the development of his long-run farm program, he is left increasingly to self-direction.⁴

Amount of Loan Funds Advanced

The amount of operating loan funds extended by the Farmers Home Administration to the 5,555 families during the period studied averaged \$2,728 per family (table 8). It averaged \$3,215 per family in the North, \$4,114 in the West, and \$2,167 in the South. These regional differences probably reflect differences among regions in the capital requirements of farming and differences in the demands made on FHA resources to alleviate the economic distress of people with limited farming or employment capabilities.

It could not be learned from the data available how these credit advances were dis-

tributed over time. The borrowers operated under the FHA program for an average of 3.3 years. If the credit advances had been uniformly distributed over this period, they would have amounted to about \$825 per family per year. Usually, however, FHA operating loans are largest in the first year under the program when they must finance both capital adjustments and annual farm operations.

How the credit advances were used must be inferred from general FHA practices and from a study of changes made by the FHA borrowers in size and type of farm and in the value and form of nonland capital resources.

³ This is generally interpreted to mean a farm on which no sharecropper or wage families are employed full-time in the loan applicant's farming operations and on which most of the farm labor is performed by the farm operator and members of his family.

⁴ Mace, A. T., Supplemental Credit as an Instrument of Post-War Agricultural Policy, Unpublished PhD Thesis, George Washington University, Washington, D. C., 1955.

TABLE 8.--Average credit advance per borrower, and percentage distribution of borrowers by size of credit advanced while on FHA program, major regions and United States

Item	North	West	South	United States
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Average amount of credit advance per borrower.....	3,215	4,114	2,167	2,728
Percentage of borrowers receiving credit advances of:	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Less than \$500.....	0.6	1.3	9.1	5.4
\$500 to \$999.....	3.4	4.2	20.6	13.1
\$1,000 to \$1,499.....	7.0	5.8	17.4	12.7
\$1,500 to \$1,999.....	10.6	8.0	11.5	10.8
\$2,000 to \$2,999.....	25.8	20.8	18.2	21.0
\$3,000 to \$3,999.....	27.0	18.8	9.2	16.1
\$4,000 to \$4,999.....	12.7	10.6	5.7	8.6
\$5,000 to \$7,499.....	10.9	20.3	5.9	9.2
\$7,500 and more.....	2.0	10.2	2.4	3.1
Total.....	100.0	100.0	100.0	100.0

Tenure Under Which the Families Operated

Families in the study sample were classified into three major groups based on tenure while under the FHA program: (1) Owners who had bought their farms with ownership loans obtained under provisions of the Farmers Home Administration or its predecessor agency; (2) owners who had acquired their farms in other ways; and (3) tenant operators.

Of the 5,555 families in the study sample, 19.5 percent were on farms they had bought with FHA ownership loans; 43.5 percent were in the other ownership class; and 37.0 percent were tenant operators (table 9). Families in the first of these tenure groups had received technical assistance under the FHA ownership program in buying and developing their farms.

Major Changes in Farming Made by Families in the Study Sample

Size of farms

In the course of their operations under the FHA program, borrowers in the study sample enlarged their farms by an average of 24 acres of total land, or by 17.9 percent. On the average, they increased their acreage of cropland by 18 acres per farm, or 23 percent (table 10).

Practices and yields

Detailed information on crop and livestock practices was not contained in the records used for the study reported. But it is evident that improvements in crop and livestock production practices are among the important changes made by borrowers while under the FHA program. These improvements are reflected in higher rates of production for all major farm enterprises. Borrowers' cotton yields were increased by nearly a third, their yields of tobacco by 88 pounds per acre, their yields of corn and wheat by 6.1 and 2.2 bushels, respectively, and their yields of alfalfa hay by about a third of a ton (table 11). Percentage-wise, these increases in yield are substantially larger than were made from 1947 to 1953 in our agriculture generally (table 12).

Other changes

Most borrowers increased significantly their investments in farm machinery and livestock and the amount of funds used for such annual operating items as seeds, fertilizers, insecticides, and feeds. In an average of 3.3 years, working capital per farm was increased from \$3,340 to \$5,626, or by 68 percent, while funds invested in annual operating expense items were increased from \$1,522 to \$2,757, or by 81 percent (table 10). These combined increases represent values that correspond closely to the total credit advances made by the Farmers Home Administration in operating loans to these families (table 11).

Throughout much of the Nation and in the South, in particular, the Farmers Home Administration has emphasized increases in livestock production as a way of helping its borrowers increase their incomes. While under the FHA programs, borrowers in the study sample in the country as a whole increased the value of their livestock and livestock product sales by 76 percent. In the South, the increase amounted to 83 percent (table 10).

TABLE 9.--Percentage distribution of borrowers by tenure while under FHA program, major regions and United States

Tenure	North	West	South	United States
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Owners whose farms were purchased with FHA loans.....	11.4	8.8	26.5	19.5
Other owners.....	36.9	65.2	43.0	43.5
Tenants.....	51.7	26.0	30.5	37.0
Total.....	100.0	100.0	100.0	100.0

TABLE 10.--Major changes made by borrowers from time of entry into FHA program to 1953, major regions and United States

Item	Year before entry into program	1953	Difference	
			Quantity or amount	Percentage change
Average size of farm:	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Percent</u>
All farmland:				
North.....	157	193	36	22.9
West.....	201	211	10	5.0
South.....	107	126	19	17.8
United States.....	134	158	24	17.9
Cropland:				
North.....	117	144	27	23.1
West.....	79	96	17	21.5
South.....	56	69	13	23.2
United States.....	79	97	18	22.8
Average annual operating expenses:	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
North.....	1,955	3,817	1,862	95.2
West.....	2,340	3,989	1,649	70.5
South.....	1,228	2,012	784	63.8
United States.....	1,522	2,757	1,235	81.1
Average value of working capital:				
North.....	3,513	7,250	3,737	106.4
West.....	4,961	8,430	3,469	69.9
South.....	2,919	4,110	1,191	40.8
United States.....	3,340	5,626	2,286	68.4
Average value of livestock receipts:				
North.....	2,107	3,770	1,663	78.9
West.....	1,775	2,724	949	53.5
South.....	609	1,114	505	82.9
United States.....	1,232	2,168	936	76.0

TABLE 11.--Increases made in yield per acre of selected crops by borrowers while on FHA program¹

Crop	Unit	Yields			
		Year before entry into program	1953	Difference	
				Amount	Percent
Cotton.....	Pound	274	362	88	32.1
Tobacco.....	do	1,264	1,352	88	7.0
Corn.....	Bushel	38.3	44.4	6.1	15.9
Wheat.....	do	12.0	14.2	2.2	18.3
Alfalfa hay.....	Ton	2.6	2.9	.3	11.5

¹ Comparisons are limited to States that are major producing areas for the particular crop whose yields are compared. These are mainly the Southern States for cotton and tobacco, mainly the Midwest and the Great Plains for corn and wheat, and the Midwest and the West for alfalfa hay.

TABLE 12.--Average yield per acre of selected crops, all farms in the United States, 1947-53

Year	Cotton	Tobacco	Corn	Wheat	Alfalfa hay
	<u>Pounds</u>	<u>Pounds</u>	<u>Bushels</u>	<u>Bushels</u>	<u>Tons</u>
1947.....	267	1,138	28.4	18.2	2.2
1948.....	311	1,274	42.5	17.9	2.2
1949.....	282	1,213	37.8	14.5	2.1
1950.....	269	1,269	37.6	16.5	2.1
1951.....	269	1,310	36.2	16.0	2.2
1952.....	280	1,273	40.7	18.4	2.2
1953.....	324	1,261	39.9	17.3	2.2

U. S. Department of Agriculture, Agricultural Statistics, 1956. 608 pp., 1957

RESULTS OF THE ADJUSTMENTS MADE

Improvements in Income

While under the FHA program, borrowers in the study sample increased net cash income from both farm and nonfarm sources from \$1,875 for the year before they entered the program to \$2,760 for 1953. This was an increase in annual money income of \$885 per borrower, or 47 percent (table 13). During this period, the value of food and fuel produced on the farm for home use increased from \$420 to \$566. Thus the increase in cash and non-cash income combined was slightly more than \$1,000. The average annual money income of

the families assisted had been brought up to about the average income of farm-operator families in the Nation generally. Only a very small part of these increases in income can be explained by changes in farm prices. At 258, the farm price level in 1953 was lower than in any year since 1947 except in 1950, when relative to the 1910-14 base the index of prices received by farmers was 250. The prices paid by farmers for machinery, fertilizer, and other items of expense increased throughout most of the period of study.

Improvements in Capital Worth of Families

The extent to which families in the study sample have increased the income-earning resources they own may be measured by their gains in net worth. At the time of their loan applications, these borrowers had an average net worth of \$5,452. By the end of 1953, their net worth averaged \$8,722 per family, an increase of \$3,270, or 60 percent (table 13). These gains were achieved within an average time span of 3.3 years.

Besides improving their capital resources, many of these farmers and members of their families have learned new ways of farming and their labor and management capacities have increased in other ways. No doubt, the progress they have made has inspired in them increased hope and confidence in their abilities, which help to enliven and energize their capacities.

TABLE 13.--Changes in average net cash income and net worth per borrower while under program, major regions and United States

Item	Year before entry into program	1953	Difference	
			Amount	Percentage change
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
Average net cash income:				
North.....	1,876	3,170	1,294	69.0
West.....	2,614	4,252	1,638	62.7
South.....	1,684	2,224	540	32.1
United States.....	1,875	2,760	885	47.2
Average net worth:				
North.....	4,737	9,490	4,753	100.3
West.....	9,167	14,750	5,570	60.9
South.....	5,110	7,230	2,120	41.5
United States.....	5,452	8,722	3,270	60.0

ELEMENTS ASSOCIATED WITH DIFFERENCES IN PROGRESS MADE

Although the average family in the sample made substantial progress while under the FHA farm operating program, the amounts of progress among individual families and among regions, States, and local areas differed greatly. The lower rates of progress observed are unfortunate in terms of the income and resource objectives of the families. But variations in progress, coupled with knowledge of other attributes of these farms and families, are the grist from which ideas already held

may be tested and new insights gained into the causes, nature, and possible solution of the low-income farm problem. It was to this task that the part of the study reported in this section was directed. To the extent that the task can be done, the experiences of the least successful and the most successful borrowers alike have relevance for the problem of low incomes on other farms than those now served by the FHA.

The General Environment Within Which the Families Operated

Approaches to their income and resource problems by FHA borrowers were limited to things done on an individual farm family basis. Hence, such factors as farm technologies available, processing and marketing facilities for farm products, and pressure of population on land and related rental rates and land values had to be taken as given, and farm operations were conducted within the limitations set by these conditions. Yet these things may affect farmers' adjustment opportunities and their rates of progress.

In fact, it seems probable that the regional and area-to-area variations in rates of progress observed among FHA borrowers resulted mainly from differences among regions and areas in general social and economic environment rather than from differences in character and labor and management capacities of the borrowers. No suitable techniques are available by which to measure from knowledge of their farming operations, differences in industry and in management capacities of people whose resources and opportunities vary greatly. However, available evidence does not support the view that in the United States there are marked differences among regions or among large social and economic groups of people in native intelligence or in response to improvement in their income-earning opportunities. But it is common knowledge that regions and areas differ widely as to patterns and stages of economic development and in the complexity of their economic adjustment problems.

Regional variations

For many decades, the South has been listed as the Nation's major economic problem area. Comparatively low levels of education, high rates of tenancy, a high ratio of farm people to land, small farms, and a small supply of capital are only a few of the complex of conditions that are considered problems of agriculture in the South.

These conditions are commonly believed to impose limitations on the farm-adjustment opportunities open to the region's low-income

farm people. If this belief is valid, such conditions have probably limited both the adjustments that were feasible for the borrowers and the rates of progress they have made. In their last year under the FHA program, the South's borrowers had an average annual income that was only \$540 larger than the income they earned in the year before entering the FHA program. Borrowers in the North and West made gains of \$1,294 and \$1,638, respectively (table 13). Percentagewise, the average income gain in the South was 32 percent. In the North and West, it was 69 and 63 percent, respectively. Increases in net worth were also substantially lower in the South than in the North and West, both in dollars and relative to the borrowers' net worth at the time they entered the FHA program.

Associated with the relatively low rates of progress in the South are other factors than regions per se, which some persons might consider important causes for the lower rates of progress. Measured by acreages of both total land and cropland, the South's borrowers increased the size of their farms less than did borrowers in other regions. They increased annual operating capital less, as measured by annual operating expenses, and they also increased investments in livestock, machinery, and other operating capital items less. They received smaller credit advances and remained under the FHA operating loan program for a shorter period of time than did borrowers in the North and West. But no evidence is available to indicate that the Farmers Home Administration is doing less relative to potentialities to help the South's farmers than to help those in other regions. The region's relatively high ratio of people to its other resources may explain why more is not being done.

Area and local differences

That the local farm situation in general affects adjustment opportunities of low-income farmers is shown by data on a State economic area basis which relate rates of progress by borrowers to the median income of all farm

families in the area. Within each region, the increase in income to borrowers was low in State economic areas in which the median income of all farm families was low (table 14; figs. 2, 3, and 4). The average gain in income made by borrowers increased, as did the median income of all farm families.

In State economic areas of the North in which the median income of all farm families in 1949 was less than \$1,000, borrowers averaged only a \$448 increase in income while under the FHA program. This increase was only slightly larger than that made by borrowers in the South's State economic areas with median incomes of less than \$1,000 for all farm families. Also, borrowers in the few State economic areas of the South with median incomes of \$2,000 or more for all farm families made as large dollar increases in

their incomes and larger percentage increases than did borrowers in either the North or the West who lived in State economic areas having the same median incomes.

These differences among regions and among State economic areas in rates of progress support the view that the low-income farm problem is one that needs to be attacked not only at the level of individual farms but on area-wide, regional, and national bases. At the local level, farming innovations of kinds that sometimes hold great promise are feasible only if made simultaneously by a large enough number of farmers to make it economical to provide the needed production factors, including special technical assistance and processing and marketing facilities. This is particularly so for innovations that involve new products, such as the shift to production of milk for manufacturing uses in cotton areas

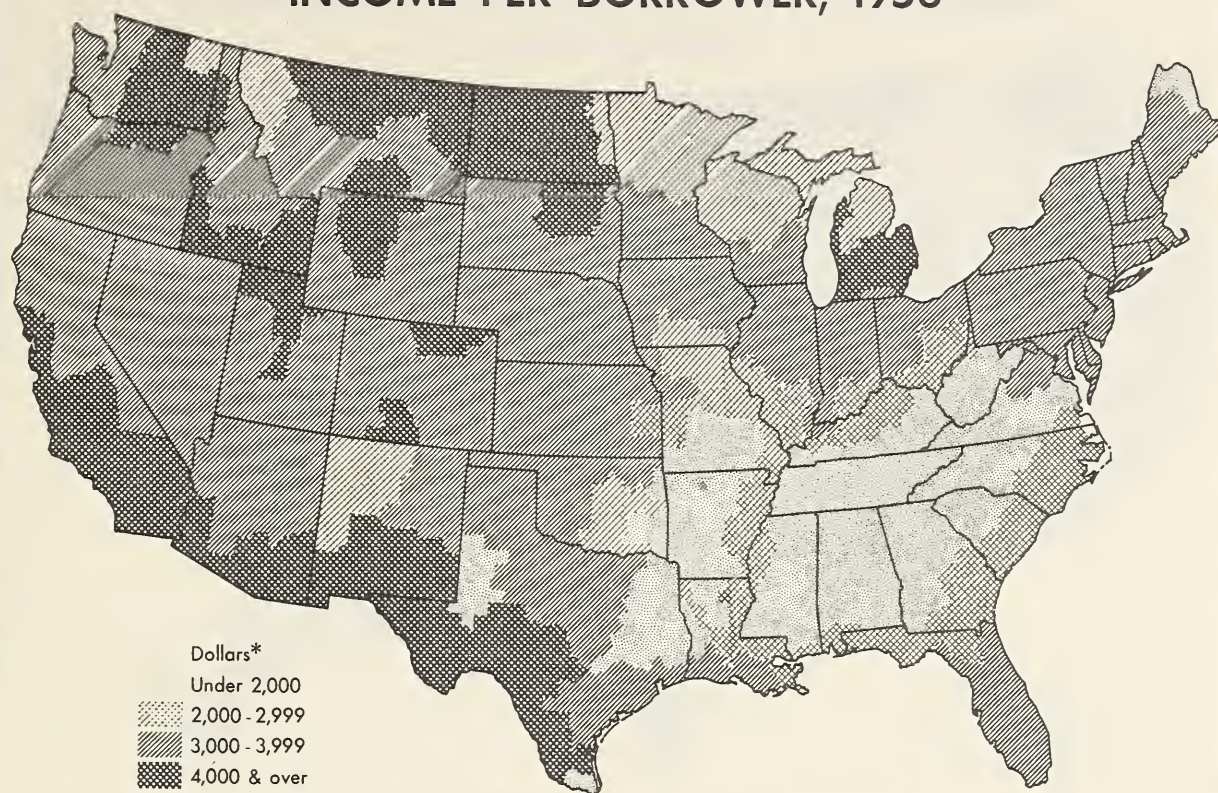
TABLE 14.--Change in average net cash income while under FHA program, borrowers grouped according to 1949 median income of all farm families and unrelated individuals in borrowers' State economic areas¹

Region, and 1949 median income of all farm families and unrelated individuals in borrowers' State economic area	Net cash income of borrowers from all sources			
	Year before entry into program	1953	Difference	
			Amount	Percentage
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
North:				
Less than \$1,000.....	1,660	2,108	448	27.0
\$1,000 to \$1,499.....	1,925	2,766	841	43.7
\$1,500 to \$1,999.....	1,872	2,892	1,020	54.5
\$2,000 to \$2,499.....	2,072	3,339	1,267	61.1
\$2,500 and more.....	2,094	3,513	1,419	67.8
All areas.....	1,876	3,170	1,294	69.0
West:				
Less than \$1,500 ²	1,581	2,409	828	52.4
\$1,500 to \$1,999.....	2,803	4,020	1,217	43.4
\$2,000 to \$2,499.....	2,699	4,266	1,567	58.1
\$2,500 and more.....	3,133	5,079	1,946	62.1
All areas.....	2,614	4,252	1,638	62.7
South:				
Less than \$1,000.....	1,623	2,020	397	24.5
\$1,000 to \$1,499.....	1,714	2,257	543	31.7
\$1,500 to \$1,999.....	1,971	2,669	698	35.4
\$2,000 and more ²	1,830	3,261	1,431	78.2
All areas.....	1,684	2,224	540	32.1

¹ The median income in 1949 of all farm families and unrelated individuals by State economic areas is that reported in Robert B. Glasgow's Farm Family Income--Its Distribution and Relation to Nonfarm Income, U. S. Agr. Res. Serv., ARS 43-34, 1956.

² The number of State economic areas with median incomes of indicated size was too small to permit further division into income classes.

INCOME PER BORROWER, 1953



*AVERAGE NET CASH INCOME OF SAMPLE FHA BORROWERS FROM ALL SOURCES.

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FIGURE 2.--The income earned by FHA families in the study sample varied widely among regions and areas. These variations are believed to reflect largely the differences in farm adjustment opportunities associated with regional and area differences in the supply and prices of land and labor, in adaptable kinds of farming, in markets for farm products, and in other conditions whose correction is largely beyond individual control.

of the South, where the needed processing and marketing facilities would show large economies of scale. In such instances, there is need to engage simultaneously the interests and resources of many people living in close proximity to each other before these adjustments are practicable for any one farmer.

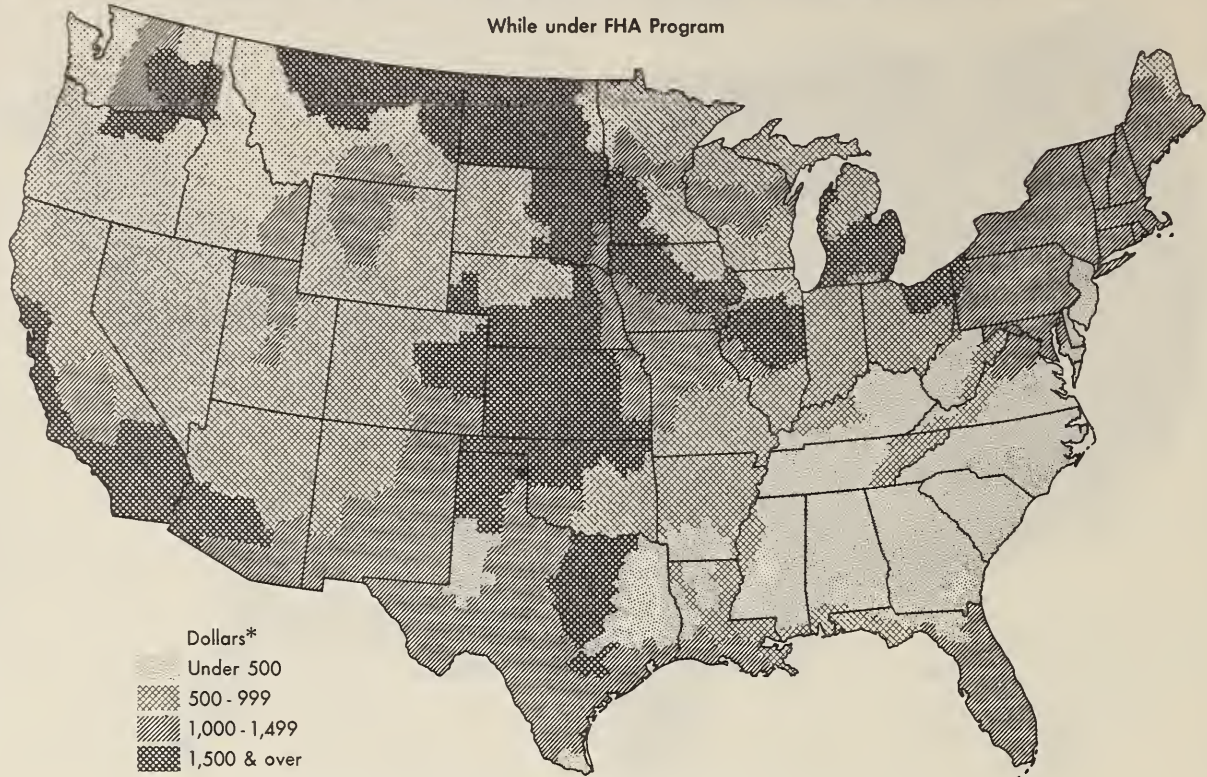
Some of the things needed to improve the production and employment opportunities of low-income areas are not practicable for a community, county, or trade area, to do alone. This may be true of research to develop improved kinds of crops and livestock and improved farming methods. It may also be true of the conservation and development of water and hydroelectric power resources. An example is the work done in recent decades in the Tennessee Valley, where development of power resources has helped to make dairying, poultry raising, and other enterprises, more feasible on farms in the area.

Some of the essentials in solving the problem of low incomes can be done only by individual farm families. Others can be done only by local communities. But a community or a county located in a large low-income region

that contains no major barriers to labor movement and trade may be unable to raise the labor productivity of its people substantially unless similar progress is made in the larger region of which it is a part. As a county attempts to absorb the underemployment within its own boundaries, it takes on inescapably some of the underemployment of the whole area and region in which it lies. Through the processes of trade and labor movements, the benefits of local measures tend to be diffused over the larger region and over the Nation generally. The idea that the problem of low farm incomes is one that the low-income areas themselves can solve, regardless of what is done in other areas and in the Nation as a whole, might apply to a relatively self-sufficing economy. But in a modern exchange economy, the level of income and the well-being of every individual, community, and region is affected to some extent by the levels of income and the well-being of others. There is as much need for a carefully planned and well coordinated and directed low-income program on national and State bases as for programs at local community and individual farm levels.

INCREASE IN INCOME PER BORROWER

While under FHA Program



*AVERAGE INCREASE IN NET CASH INCOME OF SAMPLE BORROWERS PAYING OFF LOANS IN 1953.

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FIGURE 3.--The increase made by FHA Operating Loan Borrowers while under this loan program is the best available measure of their success in solving their low-income problem. Differences in rates of progress among regions and areas, however, indicate that solution of the low-income farm problem is likely to require many adjustments of kinds involving policies that are regional and national in scope.

Family and Farm Attributes Observable at Times of Loan Applications

Differences in rates of progress by FHA borrowers between regions and areas reflect regional and area differences in economic environment and in farm-adjustment opportunities in general, as well as regional and local differences in FHA administrative practices. Rates of progress, however, vary widely from family to family within each local administrative unit in which the FHA operates. This variation indicates that differences in personal characteristics, in resources and in the way families use their resources, as well as differences in environment, affect the incomes of these families and the rate of progress.

After the fact, it is easy to show how each of many factors was related to the rates of progress made by borrowers under the FHA program. But when applications for loans are made, personnel of the Farmers Home Administration do not know how its borrowers will perform while under the program. On the basis of each borrower's current situation and his past performances, which may have

been under highly restricted resource conditions, they must judge how the borrowers will perform under more favorable but different resource situations.

FHA personnel must answer such questions as, What is the measure of a family's capabilities under resource conditions less restricted than those under which it has operated in the past? Does the family's past performance reflect merely its capital resource limitations, or is it a measure of the family's labor and management capacity? What differences do such things as a farmer's age, race, and tenure of the farm he plans to operate, make? Is there a connection between the family's present net worth and its capacity to make productive use of more capital? How well can one judge the family's capacity from the size and kind of farming it has done in the past and from its income in previous years?

In this section, an attempt is made to show how such factors were related to the success of families in the study sample in achieving

INCREASE IN NET WORTH PER BORROWER

While under FHA Program

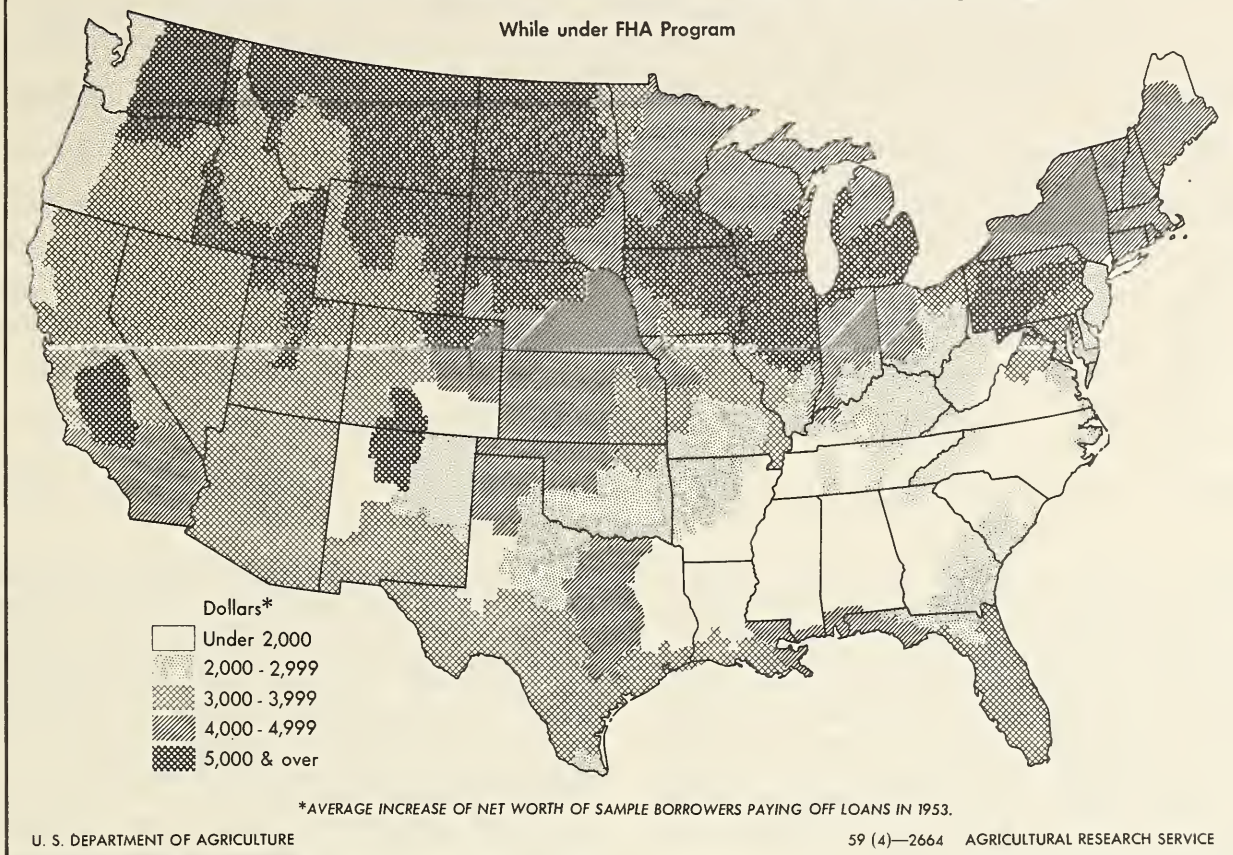


FIGURE 4.--Increases made by FHA Operating Loan Borrowers in their net worth represent mainly the income they have put aside for the purpose of increasing future income. The chief factor affecting the rate of such savings is the size of family income. Families in lower income areas, therefore, are at a relative disadvantage in building up their income earning capacity, even with the assistance of such agencies as the Farmers Home Administration.

their objectives as to improvement of income and resources. Knowledge of these relationships should help in evaluating these factors as bases of judgment in providing financial and technical assistance to the Nation's remaining low-income farm families.

Age of operator

Many students of farm finance problems have recognized that getting experience in both farming practices and farm and financial management is important to a young man with little capital who wishes to farm. Time is considered important in both development of managerial ability and accumulation of capital.

The study reported here indicates that the largest incomes were made by farmers under 40 years of age. Those under 30 did better than those 40 years old and over (table 15). By helping families to obtain additional capital during their younger, more productive years, the FHA is helping them to achieve a better correlation between their labor and management capacities and their command of capital resources. The results achieved by the younger

farmers in the study sample indicate the wisdom of such a policy.

Race

Does the low-income family's race affect its capacity and its opportunities to improve its income and resource situation when capital limitations can be overcome? The view is widely held that in the South, in particular, race, as well as age and education, "tempers the changes made in . . . agriculture."⁵ To examine this view in the light of the experiences observed in the study, families in the study sample who lived in the South were classified into two groups--white and nonwhite. The respective rates of progress of the two groups and associated characteristics other than race were examined.

Of the South's families in the study sample, about 23 percent were nonwhite and 77 percent were white. Of the two groups, the whites had substantially the larger average annual income

⁵ Bankers Farm Bulletin, Vol. X No. 1 (January 1958), U. S. Federal Reserve Bank of Atlanta, p. 3.

TABLE 15.--Average net cash income by age group of borrower, major regions and United States, 1953

Age of borrower (years)	North	West	South	United States
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Under 30.....	3,287	4,263	2,578	3,124
30 to 39.....	3,375	4,290	2,457	3,009
40 to 49.....	3,168	3,984	2,217	2,599
50 to 59.....	2,693	3,382	1,925	2,236
60 to 64.....	2,094	3,013	1,666	1,809
65 and over.....	2,135	2,979	1,376	1,675
All ages.....	3,170	4,252	2,224	2,760

in their last year under the FHA program (\$2,386 compared with \$1,672 for nonwhites). Also, both in dollar terms and relative to their incomes before entering the FHA program, the whites made a better showing than did the nonwhites. Annual incomes of the former increased by \$609 compared with an increase of \$229 for the nonwhites. The whites increased their net worth while on the FHA program by an average of \$2,420 and the nonwhites by an average of \$1,070 (table 16).

Why these differences? That they result from inherent differences between races in labor and management capacities is not supported by available evidence. That, to a significant extent, they are the result of preferential treatment of whites over nonwhites in farm factor and product markets is unlikely when one examines the conditions that would need to obtain for such differences to grow out of racial preferences. Competitive farm product and factor markets tend to be impersonal and indifferent with respect to race or creed of buyers and sellers. Some persons of one group may buy from those of another only at lower prices than they pay members of their own group. But the presence of even a few buyers who are indifferent as to the race of those with whom they trade would largely negate the income effects in any competitive market system of widespread racial preferences.

To the extent that farmers buy and sell in competitive markets, it is unlikely that race *per se* makes a great deal of difference in the prices they pay and those they receive.

If, however, there are market imperfections that make for the rationing of factors and employment opportunities, the minority group may bear a large part of the burden of the associated underemployment. Some persons believe that rationing prevails widely in farm capital markets. But it is improbable that

this is true under Farmers Home Administration policies. The only place within the market system at which racial preferences could have resulted in an appreciable income disadvantage for nonwhites was in nonfarm employment. White families in the sample had an average income from nonfarm sources of \$520 compared with only \$222 for nonwhites.

When whites and nonwhites are the same age, and operate with the same quantity and quality of land and other capital resources, the incomes earned by the two groups are about the same. For southern farm operators 30 to 49 years of age, with \$5,000 or more in working capital and with no nonfarm income, nonwhites had an average family income in 1953 of \$3,496 compared with \$3,369 for whites (table 17). For those who met these specifications except for having nonfarm earnings that ranged from \$1 to \$999, the nonwhites had an average family income of \$2,742 compared with \$2,748 for the whites. For those with nonfarm earnings of \$1,000 or more, the average family income was \$4,506 for the nonwhites and \$3,945 for the whites.

Net worth of families when they applied for loans

How good an indicator of its capacity to use more capital productively is a low-income family's present net worth? What people have already accumulated is often used as a measure of their potentialities. If it were a sufficient index of the family's capabilities, the low-income farm problem would be insoluble except through relief measures. Production and income under given market conditions, however, are a function of the kinds and quantities of resources used. Fortunately, some of these resources are amenable to individual and group action. Hence, considered apart from the kinds of opportunities and

TABLE 16.--Selected characteristics of borrowers by race and tenure, in year before entry into program and in 1953, the South

Item	Owners				Tenants		All tenure groups	
	Farms purchased with FHA loans		Other					
	White	Non-white	White	Non-white	White	Non-white	White	Non-white
Age of borrower when entering program.....years..	41	51	41	50	37	43	40	48
Cropland per farm, 1953.....acres..	67	55	66	48	92	51	74	51
Cash receipts per farm, 1953....dollars..	4,387	3,028	3,602	2,531	4,870	2,854	4,180	2,795
Off-farm income per family, 1953.....do..	491	219	592	228	438	208	520	222
Livestock receipts per dollar of crop receipts, 1953.....cents..	53	86	83	103	28	65	52	85
Net cash income per farm from farm sources, 1953.....dollars..	2,044	1,721	1,779	1,426	1,893	1,211	1,880	1,454
Net cash income from all sources:								
Year before entry into program.....dollars..	1,970	1,757	1,789	1,321	1,571	1,247	1,777	1,443
1953.....do..	2,514	1,932	2,349	1,645	2,333	1,422	2,386	1,672
Increase.....do..	544	175	560	324	762	175	609	229
Net worth per borrower:								
Year before entry into program.....dollars..	5,630	4,810	7,190	4,900	2,700	1,920	5,450	3,920
1953.....do..	8,100	5,820	9,790	6,080	4,830	2,920	7,870	4,990
Increase.....do..	2,470	1,010	2,600	1,180	2,130	1,000	2,420	1,070

obstacles people have had, there is little logic in judgments of capabilities based on what people have accumulated.

The net capital worth of the families studied at the time they applied for loans had little consistent relationship to their success in increasing their incomes and net worth under the FHA program (table 18). In the South, for example, families with a beginning net worth of less than \$1,000 made larger gains in both annual income and net worth than did families in net worth classes ranging from \$1,000 to \$14,999. In the North, families worth \$20,000 or more at the outset of their FHA operations made less progress, both in dollar increases in income and net worth and relative to their economic situation at the outset of their FHA operations.

The FHA program was designed to provide low-income farm families with an opportunity to increase their incomes under more favorable conditions than those to which they have been

accustomed. Without as much financial assistance as is provided by the Farmers Home Administration, it is likely that here, as well as among the farm population groups treated in some other research studies, the beginning net worth of families in the study sample would have been closely related statistically to their later earnings and progress. From such close statistical association between farmers' capital worth and the success of credit operations, some credit agencies have developed a general operating principle, which is that a farmer's net worth is an important measure of his management capacity and hence of the amount of credit that can safely be advanced to him. This operating principle can be connected to the success of farming operations in a cause-effect type of relationship only because it is used as a basis for credit advances. Hence, it is closely related statistically to the size of the total bundle of resources that farmers are able to command.

TABLE 17.--Average net cash income, white and nonwhite borrowers 30 to 49 years of age grouped by amount of working capital and off-farm income, the South, 1953¹

Item	Working capital per farm of--		
	Less than \$3,000	\$3,000 to \$4,999	\$5,000 and more
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Families with no off-farm income:			
White.....	1,481	2,422	3,369
Nonwhite.....	1,445	2,360	3,496
Families with \$1 to \$999 off-farm income:			
White.....	1,445	2,113	2,748
Nonwhite.....	1,388	2,136	2,742
Families with \$1,000 or more off-farm income:			
White.....	2,277	2,814	3,945
Nonwhite.....	2,291	3,660	4,506

¹ Age of borrower is that at time of loan application.

TABLE 18.--Average increase in net cash income and net worth while under program, borrower classified by net worth at time of loan application, major regions

Beginning net worth (dollars)	Increase in money income			Increase in net worth		
	North	West	South	North	West	South
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Minus value.....	636	1,037	2,299	5,780	4,920	5,010
1 to 999.....	802	2,943	771	5,380	6,980	2,960
1,000 to 1,999.....	1,121	1,140	410	5,150	7,280	1,910
2,000 to 2,999.....	1,347	1,338	636	4,820	6,580	2,130
3,000 to 4,999.....	1,396	1,528	473	4,570	6,020	2,110
5,000 to 7,499.....	1,310	1,991	410	4,090	7,100	2,060
7,500 to 9,999.....	1,132	1,718	596	3,640	4,980	1,800
10,000 to 14,999.....	1,504	1,189	630	4,330	4,160	1,900
15,000 to 19,999.....	1,520	1,021	960	3,980	5,230	2,830
20,000 and more.....	1,107	2,167	1,217	3,120	3,270	3,310
Total.....	1,294	1,638	540	4,753	5,583	2,120

TABLE 19.--Changes in average net cash income while under program, borrowers grouped by acreage per farm operated in year before entry into program, major regions

Size of farm (acres)	North			West			South		
	Income in year before entry into program	Income in 1953	Increase in income	Income in year before entry into program	Income in 1953	Increase in income	Income in year before entry into program	Income in 1953	In- crease in income
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
1 to 49.....	2,201	3,790	1,589	2,568	3,758	1,190	1,400	1,874	474
50 to 74.....	1,844	3,031	1,187	2,891	3,780	889	1,702	2,116	414
75 to 99.....	1,888	3,150	1,262	2,487	3,831	1,344	1,656	2,233	577
100 to 149...	2,040	3,069	1,029	3,151	4,095	944	1,703	2,188	485
150 to 199...	1,961	3,111	1,150	2,886	3,943	1,057	1,714	2,287	573
200 to 299...	2,063	3,082	1,019	3,232	5,009	1,777	2,095	2,629	534
300 to 399...	1,851	2,830	979	3,216	4,528	1,312	2,041	3,215	1,174
400 to 599...	1,949	3,469	1,520	3,036	3,638	602	2,552	2,785	233
600 and more.	2,182	3,979	1,797	2,366	5,706	3,340	3,134	4,845	1,711

As a credit guide, closely relating credit advances to the net worth of borrowers may be a sound business practice. It may be justified by the large incidence of risk and uncertainty that credit agencies bear in the credit financing of farm improvements and operations. But this operating principle cannot be defended either logically or by farmer experiences on the grounds that what farmers have earned and saved in the past considered apart from their past opportunities is a satisfactory measure of their capabilities and potentialities.

Size of farm previously operated

Can the capacity of low-income farm families to improve their incomes and increase their resources when given access to more capital be judged by the size of farm they previously operated? To help answer this question, families in the study sample were classified by the size of farm they operated in the year before entering the FHA program. Two different measures of farm size were used, and comparisons were made of progress under the program.

Size of farm in terms of acres of land.--Little relationship was found between size of farm previously operated by families in the study sample and their incomes and rates of progress under the program (table 19). Surprisingly little relationship was found, especially in the North and West, between previous size of farm and previous income, and between

previous size of farm and income and rate of progress under the program.

Size of farm as indicated by value of sales or economic class of farm⁶.--The value of sales of farm products is probably the best available measure of farm size in terms of the total of land, other capital, and labor inputs used.

When families were classified according to value of sales of farm products or by economic class, for the year before their entry into the FHA program, it was found that their sales for that year were closely related to their net family incomes, especially those from farming, for the same year. But their sales for that year were not closely related to the later increase in income (table 20). In each region--North, West, and South--some families ended their FHA tenure in a higher value-of-farm-product sales class than the one they were in before entering the FHA program. Some ended it in a lower class, but in general, those who moved into a more productive class far outnumbered those who moved into less productive classes (table 21).

⁶ Economic classes of farms are based mainly on value of farm product sales. Classes and sales are as follows: Residential, under \$250; class VI, \$250 to \$1,199; class V, \$1,200 to \$2,499; class IV, \$2,500 to \$4,999; class III, \$5,000 to \$9,999; class II, \$10,000 to \$24,999; and class I, \$25,000 and over. Classes VI and V are further subdivided into Part-time and Full-time farms. Part-time farms are those in the value of sales class in which income of family members from nonfarm sources is equal to or larger than the value of farm-product sales.

TABLE 20.--Changes in net cash income while under program, borrowers grouped by value of farm product sales in year before entry into program, major regions

Value of farm product sales, year before entry into program	Income per family from--					
	Farm sources			All sources		
	Year before entering program	1953	In- crease	Year before entering program	1953	In- crease
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
North:						
Farms with sales of--						
Less than \$250.....	-50	1,002	1,052	1,035	2,067	1,032
\$250 to \$1,199 and off-farm income--						
Greater than farm sales.....	-480	1,451	1,931	1,095	2,383	1,288
Less than farm sales.....	322	1,963	1,641	835	2,732	1,897
\$1,200 to \$2,499 and off-farm income--						
Greater than farm sales.....	217	2,360	2,143	1,909	3,259	1,350
Less than farm sales.....	718	1,869	1,151	1,242	2,657	1,415
\$2,500 to \$4,999.....	1,419	2,406	987	1,924	3,145	1,221
\$5,000 to \$9,999.....	2,576	3,282	706	3,008	3,849	841
\$10,000 to \$24,999.....	3,693	4,122	429	4,005	4,629	624
\$25,000 and more.....	4,907	8,107	3,200	4,981	8,251	3,270
West:						
Farms with sales of--						
Less than \$250.....	-1,167	3,020	4,187	-100	3,887	3,987
\$250 to \$1,199 and off-farm income--						
Greater than farm sales.....	-184	1,668	1,852	1,314	3,066	1,752
Less than farm sales.....	154	2,904	2,750	566	3,569	3,003
\$1,200 to \$2,499 and off-farm income--						
Greater than farm sales.....	425	2,601	2,176	2,471	3,571	1,100
Less than farm sales.....	751	2,132	1,381	1,346	2,988	1,642
\$2,500 to \$4,999.....	1,655	3,056	1,401	2,348	3,892	1,544
\$5,000 to \$9,999.....	3,091	4,150	1,059	3,746	5,067	1,321
\$10,000 to \$24,999.....	6,064	7,364	1,300	6,790	8,035	1,245
\$25,000 and more.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
South:						
Farms with sales of--						
Less than \$250.....	-295	1,097	1,392	328	1,656	1,328
\$250 to \$1,199 and off-farm income--						
Greater than farm sales.....	159	1,085	926	1,243	1,852	609
Less than farm sales.....	404	1,052	648	643	1,436	793
\$1,200 to \$2,499 and off-farm income--						
Greater than farm sales.....	470	1,877	1,407	2,221	3,179	958
Less than farm sales.....	896	1,448	552	1,234	1,835	601
\$2,500 to \$4,999.....	1,763	2,137	374	2,094	2,491	397
\$5,000 to \$9,999.....	3,020	3,293	273	3,348	3,705	357
\$10,000 to \$24,999.....	4,333	4,413	80	4,809	4,633	-176
\$25,000 and more.....	10,420	6,674	-3,746	10,912	6,916	-3,996

¹ No farms in class.

Resource Situations and Resource Uses While Under the FHA Program

The low productivities and incomes of the Nation's low-income farm families can be explained in terms of their past history, that is, the labor and management capacities and capital resources they had in the past, their

equity in the resources they used, and the ways in which they used their resources and opportunities. But their future incomes will not depend upon what they have had or have done in the past but chiefly upon what they have and do

TABLE 21.--Percentage distribution of farms by value of farm product sales in 1953, farms grouped by value of sales in year before entry into program, major regions

Value of farm product sales, year before entry into program	Percentage distribution of farms by value of farm product sales, 1953									
	\$250 to \$1,199 and off-farm income-		\$1,200 to \$2,499 and off-farm income-		\$2,500 to \$4,999		\$5,000 to \$9,999		\$10,000 to \$24,999	
	Less than \$250	Greater than farm sales	Less than farm sales	Greater than farm sales	Less than farm sales	Greater than farm sales	Less than farm sales	Greater than farm sales	Less than farm sales	Greater than farm sales
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
North:										
Farms with sales of--										
Less than \$250.....	0	0	0	0	50.0	0	0	0	0	100.0
\$250 to \$1,199 and off-farm income--										
Greater than farm sales.....	0	7.7	9.2	6.2	18.5	41.5	15.4	1.5	0	100.0
Less than farm sales.....	0	0	6.3	2.1	21.1	36.8	28.4	5.3	0	100.0
\$1,200 to \$2,499 and off-farm income--										
Greater than farm sales.....	0	0	0	9.1	4.5	47.7	27.3	11.4	0	100.0
Less than farm sales.....	0	0	1.8	2.2	2.7	17.6	45.5	26.6	3.6	100.0
\$2,500 to \$4,999.....	.3	.3	1.7	2.5	6.6	35.5	38.5	14.0	.6	100.0
\$5,000 to \$9,999.....	0	0	0	0	1.3	11.2	63.3	23.8	.4	100.0
\$10,000 to \$24,999.....	0	0	0	0	0	2.9	23.5	55.9	17.7	100.0
\$25,000 and more.....	0	0	0	0	0	0	0	0	100.0	100.0
West:										
Farms with sales of--										
Less than \$250.....	0	0	0	0	33.3	0	66.7	0	0	100.0
\$250 to \$1,199 and off-farm income--										
Greater than farm sales.....	0	15.0	5.0	5.0	15.0	40.0	15.0	5.0	0	100.0
Less than farm sales.....	0	5.3	0	0	15.8	36.8	31.6	10.5	0	100.0
\$1,200 to \$2,499 and off-farm income--										
Greater than farm sales.....	0	0	0	26.6	6.7	26.7	26.6	6.7	6.7	100.0
Less than farm sales.....	1.1	3.3	3.3	3.3	18.9	44.5	20.0	5.6	0	100.0
\$2,500 to \$4,999.....	0	0	.6	1.2	11.2	31.7	40.4	14.3	.6	100.0
\$5,000 to \$9,999.....	0	0	0	.9	1.7	12.9	50.9	31.0	2.6	100.0
\$10,000 to \$24,999.....	0	0	0	0	0	2.8	25.0	58.3	13.9	100.0
\$25,000 and more.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
South:										
Farms with sales of--										
Less than \$250.....	7.7	0	15.4	0	53.8	15.4	7.7	0	0	100.0
\$250 to \$1,199 and off-farm income--										
Greater than farm sales.....	.5	18.4	10.5	10.5	36.9	15.3	6.8	1.1	0	100.0
Less than farm sales.....	.2	3.7	32.0	3.3	39.6	16.9	3.7	.4	.2	100.0
\$1,200 to \$2,499 and off-farm income--										
Greater than farm sales.....	2.1	4.2	4.2	12.5	10.4	43.7	22.9	0	0	100.0
Less than farm sales.....	.1	2.3	8.5	2.3	39.2	38.0	8.7	.8	.1	100.0
\$2,500 to \$4,999.....	0	.5	2.5	.7	17.5	51.1	23.5	4.1	.1	100.0
\$5,000 to \$9,999.....	0	0	.4	0	3.7	18.5	60.0	15.6	1.8	100.0
\$10,000 to \$24,999.....	0	0	0	0	2.1	6.5	15.2	71.8	4.4	100.0
\$25,000 and more.....	0	0	0	0	0	0	20.0	60.0	20.0	100.0

¹ No farms in class.

in the future. For any given period in the future, their incomes will be a function of the quantities and qualities of their resources, of the amount of resources they own, of the way in which these resources are used, and of market prices and technical possibilities. As any of the underlying conditions that account for their low incomes can be corrected, the Nation's low-income farm people can increase productivity and raise incomes.

Tenure of farms operated

As a matter of simple arithmetic, a family that has full equity in all the resources it uses can be expected to have a larger income than can a tenant family farming with the same amount of resources and using them in the same way. It is widely believed also that the tenure under which farm families operate affects the efficiency with which they use the resources they have and that through these effects on efficiency, tenure makes a difference over and above the income-distribution effects in the family's income. In a competitive agriculture, however, the latter effect is questionable on logical or theoretical grounds.⁷

Over a period of years, if tenure differences affect the family's rate of capital accumulation and the development of managerial ability, they affect incomes also. An owner family that can use otherwise idle labor, machinery, and land, together with small amounts of cash for new capital formation in forms that are legally attached to land, is more likely to increase its income and its resources than is a tenant family. This is true because of the greater security of expectation that ownership provides. But for any given amount of capital wealth of its own, a tenant family can operate a larger farm business than can an owner family. For this reason, some owners of small farms might increase their incomes substantially by selling their farms and using the funds to invest in operating capital for use on a larger rental farm. The size of farm increases that are possible by such a conversion, however, is affected by the ratio of human to land resources to such an extent that this kind of improvement possibility may be more limited than some persons have supposed.

In addition to the other aspects of ownership, families in the study sample who bought their farms with ownership loans obtained from the FHA or from its predecessor agency have had the added benefit of FHA technical assistance in the selection and development of their farms, as well as technical assistance in the planning of their farming operations.

With the data available in the study reported not all of the listed kinds of tenure effects

could be examined thoroughly. To examine the bearing these tenure differences may have on the low-income farm problem, however, families in the study sample were classified into three groups: (1) Owners who bought their farms under the FHA (or its predecessor's) farm ownership program; (2) other owners; and (3) tenant farmers.

In each of the three major regions, the FHA owner group had a larger income in 1953 than did the other two groups (table 22). But the differences were not appreciably large in either the North or the South. In the North, in 1953, FHA owners averaged \$3,411 in income compared with \$3,248 for other owners and \$3,063 for tenant farmers. In the South, the differences were even smaller; FHA owners averaged \$2,354, other owners \$2,220, and tenants \$2,116.

In the North, tenants improved their incomes as much as did owners while under the FHA operating-loan program and in the South, tenants made a 45-percent larger increase in annual income than was made by the FHA owners.

These results indicate that even in the South, tenancy is not an insurmountable obstacle to increases in productivity and incomes by low-income farm people. What matters most is not the tenure under which farm families operate but the quantity and quality of the resources they can command. Tenancy rates are high in the South's lower income areas, but these areas also have little land and capital per person and a lower level of education. Although low per capita productivity and incomes in these areas are associated with high rates of tenancy, it does not follow that they are currently an important cause of low incomes.

This does not mean that there are no tenure-oriented obstacles to improvements in productivity and incomes by low-income farm people. Rather, if the farm-income improvement opportunities that are emerging from the dynamics of technology and markets are to be realized, land, capital, and labor must be brought together into new combinations. If the land needed for these new ways of farming and the nonland capital and labor required are separately owned, the two kinds of resources can be brought together only if the two owners can work out plans of operation (including provisions for distribution of expenses and receipts, or the pricing of their respective resource services) that are mutually agreeable.

As market prices of land and labor at the time the new plans are being drawn up reflect more the worth of these resources in their previous forms of employment than in the new systems under consideration, they provide less than perfect directives for the agreements that must be worked out. This kind of tenure problem arises not only in high-tenancy areas, but in high-ownership low-income areas as out-migration helps to expand farm-enlargement possibilities.

⁷ Hendrix, W. E., Discussion: Relative Efficiencies of Alternative Tenure Systems, *Jour. Farm Econ.* (Proceedings Number) December 1955; Johnson, D. G., Resource Allocation Under Share Contracts, *Jour. Polit. Econ.*, April 1950.

TABLE 22.--Changes in average net cash income and net worth while under program, borrowers grouped by tenure, major regions

Region, and tenure of borrower	Income 1953	Increase while under program in--	
		Income	Net worth
North:			
Owners:	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Farms purchased with FHA loan.....	3,411	1,314	4,810
Other.....	3,248	1,257	5,040
Tenants.....	3,063	1,338	4,270
All farms.....	3,170	1,294	4,753
West:			
Owners:			
Farms purchased with FHA loan.....	4,812	1,732	4,470
Other.....	4,133	1,463	5,960
Tenants.....	4,365	2,245	4,930
All farms.....	4,252	1,638	5,583
South:			
Owners:			
Farms purchased with FHA loan.....	2,354	438	2,040
Other.....	2,220	545	2,353
Tenants.....	2,116	645	1,866
All farms.....	2,224	540	2,120

In many instances, FHA personnel have helped landowners and tenants work out mutually agreeable ways of making more effective use of their respective resources under farm leases. By attention to leasing as well as farm practices, FHA field personnel can help low-income farmers in several low-income areas to take advantage of the farm enlargement and improvement opportunities that are emerging through heavy outmigration.

Size of farms while under FHA program

This part of the report is directed toward an examination of the relationship between acreages of land and other size of farm measures and incomes and rates of progress by families studied while they were under the FHA program.

Total acres in farm.--The smaller farms tended to be identified with more labor-intensive kinds of farming. This tendency helped to offset the extent to which differences in size of farms as measured by total acreages were associated with differences in income. Nonetheless, in each of the three major regions, and particularly in the South, there was a more consistent relationship between the size of farm operated in 1953 and family income for that year than was true for the year before these families entered the FHA program (tables 19 and 23). In the South, in the earlier years, families on farms with less than 50 acres had an average income from farm sources of only \$1,373. Incomes from both farm and nonfarm sources averaged \$1,748. From this size class, the average income increased as did size of farm. In 1953, families on farms of 600

TABLE 23.--Selected measures of success and progress, borrowers grouped by size of farm in 1953, major regions

Size of farm, 1953 (acres)	Average net cash income						Average increase while under program in--					
	Farm sources			All sources			Income, all sources			Net worth		
	North	West	South	North	West	South	North	West	South	North	West	South
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
1 to 49.....	3,422	2,481	1,373	4,253	3,635	1,748	2,128	1,167	349	4,410	3,770	1,300
50 to 74.....	1,908	2,457	1,650	2,958	3,298	2,008	1,172	1,234	344	3,270	4,320	1,520
75 to 99.....	2,026	2,826	1,662	3,035	3,870	2,088	1,108	1,297	503	3,780	5,140	1,910
100 to 149.....	2,211	3,653	1,772	2,983	4,302	2,244	985	1,650	555	4,580	5,760	2,080
150 to 199.....	2,406	3,277	1,839	3,122	4,199	2,345	1,222	1,575	661	4,460	4,210	2,680
200 to 299.....	2,659	3,341	2,131	3,264	4,215	2,665	1,216	377	723	5,050	5,400	3,150
300 to 399.....	2,628	3,619	2,436	3,161	4,398	3,050	1,320	899	1,134	4,430	5,150	3,440
400 to 599.....	2,539	3,380	2,803	3,161	3,938	3,160	1,751	1,032	854	4,870	6,490	3,240
600 and more.....	3,100	4,801	4,426	3,602	5,712	5,018	2,153	3,620	2,354	6,360	8,800	7,030

acres or more had average family incomes from farm sources of \$4,426 and average incomes from both farm and nonfarm sources of \$5,018.

On farms of 300 acres and over, families in the South had about as large average incomes as did families of the same size class in the North. These results may come from the fact that at these sizes, the South's farmers use as much or more nonland capital as do farmers in the North, whereas at smaller sizes, they use appreciably less nonland capital than do farmers in the North. On farms of 50 to 74 acres, the South's families used only \$3,140 worth of working capital compared with \$5,000 in the North. Also, they used only \$1,333 of annual operating funds compared with \$2,937 in the North (table 24).

In the South, families on the larger farms used more funds for annual operating needs and had about as much operating capital as did families on farms of comparable size in the North. That is, in the South to a greater extent than in the North, operators of small farms were at a disadvantage, not only in land resources but also in nonland capital resources, and even per acre of land operated. This probably results from the fact that the types of farming commonly associated with small farms in the South do not require large investments in nonland capital. Examples are cotton, tobacco, and peanut farms, or farms that combine one or more of these enterprises.

Many families now on small farms in small-farm areas of the South can use sizable amounts of additional capital profitably only if at the same time it is profitable to increase substantially the acreages they operate. It is highly probable, however, that operators of the types of farms that prevail in small-farm

areas of the South can afford to pay more for land than it would be worth in the kinds of farming adapted to larger units. Apparently, this is true especially of flue-cured tobacco farms in the North Carolina flue-cured tobacco belt and of commercial vegetable farms in the better vegetable-growing areas of Florida. It is partly true of cotton, tobacco, and peanut farms in much of the rest of the South.

In these areas, larger farms are essential if substantial increases in income are to be made. But larger farms may not be economically feasible on an appreciable scale until the number of people in these areas who depend on agriculture is markedly reduced.

Acres of cropland per farm.--In predominantly cash-crop farming areas, as in much of the South, the relative size of farms is probably better measured by acreages of cropland than by total acreages of land. Within the South, families on farms with less than 50 acres of cropland had average net incomes in 1953 both from farm sources alone and from the combination of farm and nonfarm sources that were less than half as large as were earned by families with 200 acres or more of cropland (table 25). On an average, each additional acre of cropland above 25 acres was associated with an increase of about \$8 in family income from farm sources. Under the average conditions that obtained among families in the study sample, the operator's labor and management on a farm with 200 to 300 acres or more of cropland would normally be required to yield earnings of \$2,500.⁸ A family-operated farm of this size would need to be a

⁸ This is one of the income levels used by John M. Brewster in his *Farm Resources Needed for Specified Income Levels*, U. S. Dept. Agr. Agr. Inform. Bul. 180, 1957.

TABLE 24.--Average working capital and annual farm operating expenses per farm, borrowers grouped by size of farm, major regions, 1953

Size of farm (acres)	Working capital			Operating expenses		
	North	West	South	North	West	South
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
1 to 49.....	5,920	6,670	2,480	8,977	3,911	1,162
50 to 74.....	5,000	7,330	3,140	2,937	3,606	1,333
75 to 99.....	5,700	7,220	3,720	2,377	3,282	1,654
100 to 149.....	6,730	7,540	4,090	2,683	3,680	1,664
150 to 199.....	7,020	8,470	5,240	2,386	3,886	1,992
200 to 299.....	8,150	8,970	5,370	2,540	4,122	2,139
300 to 399.....	7,400	9,740	6,990	2,472	3,075	2,573
400 to 599.....	8,820	10,920	8,080	2,374	3,093	3,883
600 and more.....	9,350	11,080	10,410	2,456	3,006	3,857

TABLE 25.--Average receipts, income, living expenses, and bases for savings, borrowers grouped by number of acres of cropland per farm, the South, 1953

Cropland per farm (acres)	Cash farm receipts	Income from farm sources	Income from all sources	Living expenses	Income minus living expenses
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
1 to 24.....	2,846	1,327	1,766	798	968
25 to 49.....	2,886	1,454	1,869	775	1,094
50 to 74.....	3,498	1,701	2,159	863	1,296
75 to 99.....	4,166	2,020	2,471	948	1,523
100 to 199.....	5,866	2,372	2,847	1,077	1,770
200 to 299.....	8,921	3,191	3,671	1,328	2,343
300 and more.....	13,440	5,161	5,417	2,003	3,414
All farms.....	4,236	1,782	2,224	887	1,337

highly mechanized farm with grain, forage crops, and livestock emphasized.

Value of sales or economic class of farm while under FHA program.--Value of sales was important in affecting earnings of borrowers in the study sample before they entered the FHA program, and it was equally important in affecting their net incomes while under the FHA program. As the higher incomes received

in 1953 were associated with the larger rates of progress measured in terms of increases in incomes and net worth, a high value of sales in 1953 was also related closely to rates of progress (table 26). This further bears out the finding that at the end of their FHA tenure, many families were in appreciably higher value-of-sales and income classes than they were before entry into the FHA program

TABLE 26.--Changes in average income and net worth, borrowers grouped by value of farm product sales in 1953, major regions

Value of farm product sales	Cash income, 1953, from--						Increase while under program in--					
	Off-farm sources			All sources			Cash income, all sources			Net worth		
	North	West	South	North	West	South	North	West	South	North	West	South
	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars	Dol-lars
Less than \$250.....	(¹)	800	463	(¹)	720	750	(¹)	0	-170	(¹)	1,200	900
\$250 to \$1,999 and off-farm income--												
Greater than farm sales..	1,177	1,998	1,246	1,768	1,811	1,385	458	366	45	500	3,510	1,360
Less than farm sales.....	523	380	322	982	670	733	253	-1,036	-145	2,380	320	720
\$1,200 to \$2,499 and off-farm income--												
Greater than farm sales..	1,865	2,135	1,554	2,351	2,671	2,127	1,000	634	642	2,970	2,230	2,010
Less than farm sales.....	733	758	394	1,573	1,466	1,326	351	-221	119	2,490	2,840	1,330
\$2,500 to \$4,999.....	859	1,113	339	2,454	2,683	2,213	803	563	457	4,060	4,530	2,090
\$5,000 to \$9,999.....	666	880	411	3,551	4,206	3,562	1,526	1,536	1,199	5,110	5,440	3,350
\$10,000 to \$24,999.....	438	531	339	5,008	7,195	5,234	2,514	3,426	2,090	6,470	8,550	5,330
\$25,000 and more.....	376	537	391	8,719	16,392	12,173	4,831	11,825	8,566	9,440	12,720	7,270
All farms.....	708	896	442	3,170	4,252	2,224	1,294	1,638	540	4,753	5,583	2,120

¹ No farms in class.

(table 21). In 1953, families in economic classes I, II, and III had average net incomes that were from 50 percent to more than 2½ times larger than those they had during the year before they entered the FHA program. In 1953, families on farms in class I had an average net income of \$8,719 in the North, \$16,392 in the West, and \$12,173 in the South. For the year before entering the FHA program, these families had incomes of \$3,888, \$4,567, and \$5,607 in the North, West, and South, respectively. In 1953, families on farms in class III had net incomes of \$3,551, \$4,206, and \$3,562 in the North, West, and South, respectively. These incomes compared with incomes in the year before their entry into the FHA program of \$2,025, \$2,670, and \$2,363 for these respective regions.

In 1953, however, some families in the lower value-of-sales classes were in a worse position incomewise than they were before entry into the FHA program. Families in the South with farm-product sales of less than \$250 (residential farms) in 1953 received \$170 less income in that year than they had earned during the year before they entered the FHA program. In 1953, families in the West and North on farms in class VI (sales of \$250 to \$1,199, not part-time) received \$1,036 and \$245 less income, respectively, than they reported for the year before entering the program. In 1953, in the West, however, very few families were on farms in economic class VI. (See also table 21.)

Generally, operators of farms in the lower value-of-sales classes in 1953 were in one or more of the following situations:

- (1) They were not at that time conforming to the farm plans worked out with the help of their FHA supervisors.
- (2) They were the victims of adverse weather or other unfavorable crop and livestock production conditions.
- (3) Since entering the FHA program, they had become incapacitated by injury or ill health.

In the South, where many borrowers were in the older age groups, the more frequent occurrence of situation 3 would normally be expected. Each of these situations, however, can occur in any population, no matter how carefully it is selected or how good the quality of technical assistance provided. Hence, these situations, which occurred infrequently among families in the study sample, do not indicate failure by the FHA to achieve its policy objectives. Rather, they help to provide a better understanding of the kinds of problems that any agency faces in attempting to help low-income farm families in general increase their productivity and incomes. Also, the successes as well as the failures observed need first to be explained by reference to the kinds and quantities of resources these families had in the past, their technical production and employment possibilities, the prices that have prevailed, and the kinds of farming and employment in which the families have engaged. FHA operations have been a factor only as the agency has been instrumental in altering one or more of the immediately operative income determinants listed above. That is, the FHA can help only to the extent that it functions as an agency of economic development for the family farm firms it serves. It cannot alter, nor should it

be expected to make a difference in the basic physical and economic relationships that can be analyzed within a static economic framework.

Capital resources used while under FHA program

Total capital resources.--The records used for the study reported provided information on only the value of resources borrowers owned. Hence, it was not feasible to use total capital resources as a control or sorting basis for relating to income except for full owners. This was done for only one major group--the South's white full owners 30 to 49 years of age who had no income from off-farm sources.

Among these farmers, the average income of families using total farm resources worth less than \$5,000 was only \$796 (table 27). Families with farm resources worth \$10,000 to \$14,999 had an average family income of \$2,737 and those with farm resources worth \$20,000 or more had an average family income of \$4,654.

On the average, the family's income increased by about 17 cents for each additional dollar of total farm capital resources used. But the family's income per dollar invested in farming capital varied greatly from farm to farm. Only 25 percent of the families with investments of less than \$5,000 had incomes of \$1,000 and over and none had incomes of as much as \$2,000 (table 27). Among families

using farm resources worth \$5,000 to \$9,999, however, a few had incomes of \$4,000 to \$4,999 and 14.1 percent had incomes of \$3,000 and over. A third of the families with investments of \$10,000 to \$14,999 had incomes of less than \$2,000 and a third had incomes of \$3,000 and over. Incomes of \$5,000 and over were reported by 11.8 percent of these families. Interesting, too, is the fact that the average income of families with resources worth \$15,000 and \$19,999 was only slightly higher than that of families using farm resources worth \$10,000 to \$14,999.

These differences in incomes, associated with given capital investments resulted from differences in types of farming and also from differences in the efficiency with which farming operations were carried on, as indicated by crop and livestock production rates. Usually, total capital requirements were lower in types of farming for which land was a less important input than were labor and working capital. Labor-intensive types of farming had lower capital requirements for any given income than did labor-extensive types. High rates of production per acre of land or per livestock unit lowered greatly the amount of capital required for any given income. Obviously, a combination of a large labor-intensive enterprise, such as a large acreage of cotton or tobacco, and high yields has a greater effect than either alone in minimizing the amount of capital for any given income level. Differences in yields of cotton, tobacco, and many other crops in the

TABLE 27.--Average value per borrower of all farm resources and net cash income, and percentage distribution of borrowers by size of income, borrowers grouped by value of all farm resources, white full owners 30 to 49 years of age having no income from off-farm sources, the South, 1953

Item	Borrowers with total farm resources of--					All borrowers
	Less than \$5,000	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$19,999	\$20,000 and more	
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Number of borrowers.....	16	106	93	33	19	267
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Average value per borrower of--						
All farm resources.....	3,941	7,948	12,155	16,876	26,256	11,580
Income.....	796	1,822	2,737	2,898	4,654	2,414
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Percentage distribution of borrowers by size of income:						
Less than \$1,000.....	75.0	21.7	3.2	9.1	5.2	15.7
\$1,000 to \$1,999.....	25.0	42.5	30.1	6.1	10.5	30.3
\$2,000 to \$2,999.....	0	21.7	33.4	36.3	15.8	25.9
\$3,000 to \$3,999.....	0	11.3	17.2	36.4	31.6	17.2
\$4,000 to \$4,999.....	0	2.8	4.3	9.1	5.3	4.1
\$5,000 and more.....	0	0	11.8	3.0	31.6	6.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

South result more from differences in quality of management, as reflected in choice of varieties, fertilizers, insect and disease controls, and tillage practices, than from differences in the quality and value of land. Attention to these practices is important in maximizing the income that can be derived from a given amount of capital invested in farm resources or in minimizing the capital investment required for a given income.

Working capital⁹.--Farmland is productive only when labor and capital in such forms as machinery, livestock, seeds, fertilizers, and insecticides are applied to it. Many farm families have low incomes less because they farm too small acreages than because they operate with too little capital in the form of machinery, livestock, seeds, fertilizers, and insecticides. The optimum amounts of operating capital to use vary, as do the number of acres of land, type of farming, quality of management, and other factors. The amount of working capital used by families in the sample varied also as did the factors listed. But working capital available to the family may have been decisive in affecting the amount of land they used and the kind of farming they did.

When the families were grouped by amount of working capital used, incomes increased as did amount of working capital. In the South, 8.8 percent of families had less than \$1,000 in working capital at the end of their FHA tenure in 1953. These families received an average income from the combination of farm and nonfarm sources of \$1,116 (table 28). About a fifth of the South's families had from \$1,000 to \$1,999 in working capital and an average income of about \$1,460. An increase in income of about the same size was associated with each additional \$1,000 increment in working capital among families in the South.

In the North, very few families had less than \$2,000 of working capital. There, families with less than \$4,000 of working capital had slightly higher incomes than did families in the South with comparable amounts of working capital. With comparable amounts of working capital in the range of \$4,000 and over, family incomes showed relatively little difference as between the North and the South.

In the West, only 3.8 percent of the families had less than \$2,000 worth of working capital. Beginning with those with working capital values of \$2,000 and over, however, increases in working capital were associated with average increases in family income of more than \$400 per \$1,000 of additional working capital. The levels of income associated with given amounts of working capital were appreciably higher in the West than in either the North or the South.

The increases in income associated with these increases in working capital cannot be

explained wholly by differences in working capital. For as families increased the value of their working capital, they also increased the amount of land resources used. It is likely, too, that they varied so far as their labor and management capacities were concerned. Hence a considerable part of the increases in income associated with increases in capital were probably payments for superior effort and management. The fact remains, however, that, with as good management as can reasonably be expected, a family income of around \$3,500, requires from 7 to 8 times as much working capital as is needed for incomes of \$1,000, which is the median income of farm families in many State economic areas of the South.¹⁰

Credit advances by FHA.--The amount of working capital used by the families was affected by the amount of credit advanced to them by the FHA. For this reason, credit advances also are closely related to incomes of and rates of progress by families in the study sample.

While they operated under the FHA program, these families received total credit advances averaging \$2,728 per family. These credit advances and technical assistance in developing and carrying out their farm plans represented what the FHA contributed toward improving the resource bases and thereby toward increasing the income of these families. The amount of funds advanced conditioned the farm plan. In turn, the farm plan, reflecting as it did the resources, capabilities, and interests of the borrowers, was important in fixing the size of the loan. Recognizing the interrelationship between the amount of credit advanced and the farming program of the borrowers, families in the study sample were grouped by amount of credit advances, and incomes and rates of progress of the various groups were compared.

In each region, families who received small credit advances still had relatively low incomes in the last year of operation under the program. While under the program, they made relatively little progress in terms of increases in both their annual income and their net worth. This was true in each major region--North, West, and South.

In the South, families who received credit advances of less than \$500 had an average income in 1953 of \$1,340. This compared with an average income of \$2,077 for those advanced \$1,000 to \$1,499 by FHA and with an income of \$4,006 for those who received credit in amounts of \$7,500 and over (table 29). For each \$1,000 increase in credit funds advanced, income among the South's families showed an average annual increase of about \$320.

In the North, credit advances of \$500 to \$999 were associated with an average family income of \$2,324. This was \$717 higher than income obtained by southern families who

⁹ Working capital as used here includes value of machinery, livestock, feed, seed and other supplies, and cash on hand as of December 1953.

¹⁰ Glasgow, R. B., Farm Family Income--Its Distribution and Relation to Nonfarm Income, U. S. Dept. Agr., Agr. Res. Serv. ARS 43-34.

TABLE 28.--Average net cash income in 1953 and average increase in income while under program, borrowers grouped by value of working capital in 1953, major regions

Value of working capital (dollars)	Income per borrower from--						Increase in average income from all sources while on program		
	Farm sources			All sources					
	North	West	South	North	West	South	North	West	South
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Less than 1,000.....	(¹)	(¹)	875	(¹)	(¹)	1,116	(¹)	(¹)	128
1,000 to 1,499.....	(¹)	(¹)	1,079	(¹)	(¹)	1,423	(¹)	(¹)	312
1,500 to 1,999.....	1,118	(¹)	1,100	1,768	(¹)	1,493	658	(¹)	238
2,000 to 2,999.....	1,426	1,762	1,455	2,294	2,550	1,858	577	243	429
3,000 to 3,999.....	1,536	1,997	1,723	2,312	2,995	2,178	809	1,033	440
4,000 to 4,999.....	1,831	2,077	2,109	2,537	2,899	2,615	1,113	394	708
5,000 to 7,499.....	2,289	3,232	2,340	3,034	4,191	2,901	1,142	1,378	742
7,500 to 9,999.....	2,897	3,273	3,103	3,494	4,225	3,668	1,628	1,528	1,205
10,000 and more.....	3,740	5,386	4,627	4,417	6,172	5,269	1,890	3,102	1,750

¹ Number in class too small for statistically reliable result.

TABLE 29.--Average net cash income in 1953, borrowers grouped by amount of FHA operating credit received while under program, major regions

Credit received while under program (dollars)	Income per borrower from--					
	Farm sources			All sources		
	North	West	South	North	West	South
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Less than 500.....	(¹)	(¹)	1,016	(¹)	(¹)	1,340
500 to 999.....	1,556	(¹)	1,266	2,324	(¹)	1,607
1,000 to 1,499.....	1,905	2,109	1,581	2,791	2,886	2,077
1,500 to 1,999.....	1,878	2,439	1,680	2,552	3,201	2,189
2,000 to 2,999.....	2,372	2,537	1,988	3,072	3,530	2,476
3,000 to 3,999.....	2,499	3,074	2,298	3,204	4,054	2,787
4,000 to 4,999.....	2,870	3,880	2,152	3,515	4,790	2,681
5,000 to 7,499.....	3,138	4,345	3,025	3,851	5,069	3,427
7,500 and more.....	3,641	5,290	3,579	4,327	6,318	4,006

¹ Number in class too small for statistically reliable result.

received the same amounts of FHA credit funds. From this level of credit advances, the increase in incomes associated with all levels of credit advances were higher in the North than in the South. The North-South differentials narrowed, however, as credit funds were increased. In the North, for each \$1,000 increase in credit funds advanced, family income was increased by an average of about \$260 compared with \$320 in the South.

In the West, families who received \$1,000 to \$1,499 of credit had averaged \$2,886 in income, while those with credit advances of \$5,000 to \$7,499 averaged \$5,069 in 1953. Among families in the West, an average

increase in annual income of about \$500 was associated with each \$1,000 increase in credit funds advanced.

If all families in the study sample had been at the same income level at the beginning of their operations under the FHA, this association of credit advances and 1953 incomes could be taken unqualifiedly as a gage of the marginal productivity of capital in the three regions, especially of capital provided through credit. As such, it would help to show in which of the three regions credit advances made by the Farmers Home Administration yield the largest increases in both farm and national incomes per dollar of credit funds extended.

On the basis of the findings, one would conclude that for any given amount of credit extended, within the ranges set up in the study reported, families in the West earn higher incomes than those in the North and families in the North earn higher incomes than those in the South.

Probably, however, these income relationships would have been in effect in part in the absence of any credit advances. Hence, because of the relationship between credit advances and incomes in 1953, care must be taken lest it be mistakenly concluded that capital in the form of credit funds is more productive in one region than in another. More revealing of the productivity of capital than is the order in height of the lines of relations, if these lines were plotted on a chart, is the slope of the lines that these relationships define. Based on this standard, each \$1,000 of credit funds advanced appears to have yielded the largest increase in income in the West and a larger increase in the South than it did in the North.

Further examination of the data, however, reveals that the incomes the families earned before entering the FHA program were related to some extent to the amount of credit funds they received. Those with the larger credit advances also had larger incomes before the start of their operations under the FHA program. For this reason, the relationship between credit advances and the amount of increase in annual income while under the FHA program, rather than 1953 income, is the better measure of the productivity of capital provided through FHA credit funds.

Of families who received any given amount of credit advances, those in the South usually made the smallest increases in their average incomes while under the FHA program. Among families who received credit advances of less

than \$3,000, those in the North increased their incomes more than did those in the West (table 30). Families in the West who received credit advances of \$3,000 or more, however, increased their incomes a great deal more than did those who received comparable amounts of credit in either the North or the South. Differences widened as the size of credit advances increased. In 1953, families in the West with credit advances of from \$2,000 to \$2,999 had incomes that averaged \$916 higher than those they earned the year before they entered the FHA program. Meantime, those with credit advances of \$7,500 and over increased their incomes by an average of \$3,560.

From these relationships between credit advances and income increases, it might be inferred that incomes of families who received credit advances, say, of \$1,500, would have been as high as those of families who received \$4,500, if the former had received the larger amount.

The low-income farm problem could be solved easily if either farmers or credit agencies could operate safely on the basis of this kind of inference. An inference of this kind would be valid if families did not differ as to resources and other farm-improvement opportunities, abilities, interests, and needs. Available information, however, shows that families who received the smaller amounts of credit began their FHA tenure with fewer other resources and that they started from a lower income level than did those who received the larger amounts of credit. As indicated previously, what families have done in the past, considered apart from their past opportunities and obstacles and apart from the opportunities they now have, is a poor gauge of their

TABLE 30.--Average increase in net cash income and in net worth while under program, borrowers grouped by amount of FHA operating credit received while under program, major regions

Credit received while under program (dollars)	Average increase in income while under program						Average increase in net worth while under program		
	Total increase			Increase per year					
	North	West	South	North	West	South	North	West	South
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Less than 500.....	(¹)	(¹)	142	(¹)	(¹)	72	(¹)	(¹)	890
500 to 999.....	614	(¹)	177	176	(¹)	84	2,230	(¹)	1,160
1,000 to 1,499.....	852	603	437	235	183	175	2,890	2,890	1,830
1,500 to 1,999.....	1,036	348	512	262	105	190	3,780	2,860	1,970
2,000 to 2,999.....	1,243	916	701	310	254	219	4,370	3,760	2,390
3,000 to 3,999.....	1,437	1,868	984	349	534	281	5,000	5,660	3,200
4,000 to 4,999.....	1,894	2,284	840	430	617	227	5,350	6,380	3,200
5,000 to 7,499.....	1,471	2,708	1,376	327	677	372	6,120	6,990	4,170
7,500 and more.....	1,820	3,560	1,088	371	726	253	5,070	1,102	4,180

¹ Number in class too small for statistically reliable result.

potentialities. In setting the amount of credit extended to these FHA borrowers, however, careful consideration was given to their farming interests and abilities and to their current opportunities.

Probably, there is as much similarity in families and farms throughout the range of credit advances shown in table 31 as was shown in several recent studies that related capital to productivity and incomes. The findings presented here, however, show only 1953 incomes and the income increases made by families who received specified amounts of credit. They do not show the general productivity of capital without regard to the conditions under which it is used. They show, for example, that families in the South who received from \$500 to \$999 in credit funds had an average income in 1953 of \$1,607, or \$177 over their average for the year before they entered the FHA program. They show that for families who received \$1,500 to \$1,999 in credit funds: (1) Those in the South had an average income in 1953 of \$2,189, or \$512 more than before they entered the FHA program; and (2) those in the North had an average income in 1953 of \$2,552, or \$1,036 above their earlier income. Therefore, it does not follow that southern families in the lower of these groups would have earned \$582 more income (\$2,189 minus \$1,607) had they been given \$1,000 more in credit funds, nor does it follow that those who received \$1,500 to \$1,999 in credit funds could increase their earnings by moving into the agriculture of the North.

Instead, these data show only the improvements in income that have been made in association with specified amounts of credit, which were set after careful consideration of the family's capabilities, interests, and farming opportunities. The credit funds helped to enlarge their farming opportunities. But their farming opportunities are conditioned by many other factors, such as their education, skills, and experience, their age and state of health, the kinds of crops adaptable to their area, and market considerations, including those for both land and labor. Credit advances to individual farmers do not alter these factors. Hence, instead of functioning as a corrective for all the problems of low-income farm people, credit advances must be set with reference to both the social and economic environments in which the farm families operate and the resources, capabilities, and interests of individual families.

Low-income farm people who remain in agriculture need to have credit more readily available if they are to increase productivity and incomes. The productivity of each increment of credit funds, however, will vary greatly, depending on other conditions and the overcoming of other obstacles to the solution of low-income farm problems. Improvements in education and health, farm technology,

markets and market facilities, and along many other lines will help to increase the marginal productivity of capital provided through credit. Along with improvements in credit facilities for low-income farmers and areas, these improvements are needed components of any well-rounded attack on the low-income farm problem.

Uses made of farm and labor resources while under FHA program

The productivity and income of a given bundle of land, other capital, and labor resources depend not only on the size of the bundle but on how the resources are used. From the data available, an attempt was made to ascertain how variations in two major kinds of resource uses are related to incomes and rates of progress. The first of these was the use of farm resources for livestock production. The second was the use of labor resources in a combination of farming and nonfarm employment.

Variation in size of livestock enterprise.--When the families are grouped according to the value of sales of livestock and livestock products in 1953, those in the North and West with low values of such sales had about as large average incomes as did those with high values. In the South, however, as the value of livestock receipts increased, so did net family incomes (table 31).

These relationships, however, need to be examined to ascertain whether they result from differences in importance of livestock enterprises or from conditions that can be altered without increasing livestock production.

Aside from the relative profitability of crop and livestock enterprises, the size of livestock enterprises (as measured by size of livestock receipts) is associated with differences in income if the enterprises affect the size of the farm. Increases in size of livestock enterprises are associated with significant increases in the size of farms in the South, as indicated by both total value of production (table 32) and value of capital in farm resources (table 33). Even if families with livestock receipts of \$4,300 or more had had no crop sales, they would have had a larger volume of production than the average family. Hence, the increases in family income associated with increases in volume of livestock sales reflect the effects of these increases on size of farms more than they reflect the advantage of livestock over crop enterprises.

When adequate land is available, however, livestock enterprises present farm-enlarge-ment possibilities that are greater than those possible in the South's dominant cash-crop types of farming. This view is supported partly by the fact that when the South's families are grouped by size of net income, livestock receipts per dollar of crop receipts averaged only 28 cents for those with incomes of less

TABLE 31.--Average increase in net cash income and net worth while under program, borrowers grouped by value of livestock receipts in 1953, major regions

Livestock receipts, 1953 (dollars)	Net cash income, 1953			Increase in net cash income while under program			Increase in net worth while under program		
	North	West	South	North	West	South	North	West	South
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
0 to 249.....	3,236	5,202	1,900	1,265	2,107	390	3,420	7,400	1,300
250 to 499.....	2,805	5,503	1,954	1,010	3,178	407	4,020	5,400	1,790
500 to 999.....	2,330	2,976	2,053	1,040	967	431	3,920	4,100	2,020
1,000 to 1,499.....	2,253	2,863	2,315	795	454	657	3,330	5,010	2,780
1,500 to 1,999.....	2,796	3,255	2,340	1,368	955	530	3,670	3,710	3,270
2,000 to 2,999.....	2,777	3,389	2,987	1,167	1,314	1,163	4,270	5,910	2,870
3,000 to 3,999.....	2,931	4,068	2,934	1,084	1,209	886	4,260	4,460	3,350
4,000 to 4,999.....	3,276	3,901	3,212	1,246	1,664	768	5,280	4,970	3,770
5,000 to 9,999.....	4,104	5,044	4,076	1,695	2,231	1,570	6,070	5,440	5,650
10,000 and more.....	5,570	6,330	5,868	2,596	2,656	2,269	7,210	6,380	7,180
All borrowers.....	3,170	4,252	2,224	1,294	1,638	540	4,753	5,583	2,120

TABLE 32.--Average value of cash receipts by sources and of farm products used in the home, borrowers grouped by value of receipts from livestock sources, the South, 1953

Livestock receipts (dollars)	Cash receipts					Value of farm products used by family
	Livestock sources	Crop sources	Other farm sources	Nonfarm sources	Total	
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
0 to 249.....	71	3,229	56	355	3,711	654
250 to 499.....	355	2,694	66	416	3,531	677
500 to 999.....	703	2,272	74	518	3,567	677
1,000 to 1,499.....	1,175	2,082	116	681	4,054	618
1,500 to 1,999.....	1,671	1,778	119	532	4,100	646
2,000 to 2,999.....	2,336	2,214	89	604	5,243	613
3,000 to 3,999.....	3,383	1,996	80	504	5,963	636
4,000 to 4,999.....	4,337	1,660	75	492	6,564	643
5,000 to 9,999.....	6,595	1,158	148	561	8,462	661
10,000 and more.....	15,650	706	77	452	16,885	626
All farms.....	1,114	2,605	75	442	4,236	655

than \$1,000, 32 cents for those with incomes of \$1,000 to \$1,999, 46 cents for those with incomes of \$2,000 to \$3,999, and 56 cents for those with incomes of \$4,000 and over. Because livestock enterprises permit relatively large increases in size of farm, increases in livestock production intended especially to supplement the major cash crops grown in the region represent a promising way to increase employment and incomes of the South's low-income farmers. This presumes that sufficient land is available.

Also, as the value of livestock receipts per

farm reached and exceeded \$2,500, the absolute value, as well as the relative importance, of crop receipts per farm began to decline rapidly (table 32). These findings are in agreement with the widespread belief that with substantial increases in size of both livestock enterprises and farms in the South, the acreages of cotton, tobacco, and other labor-intensive cash crops will decline, except when production can be fully mechanized. Such decreases - induced by decreases in the supply of farm labor and increased possibilities for production of forage and feed grains and accompanied

TABLE 33.--Average value per farm of farm property, borrowers grouped by value of livestock receipts, the South, 1953

Livestock receipts (dollars)	Value per farm of farm property used		
	Land and buildings	Working capital	Total
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
0 to 249.....	5,780	2,920	8,700
250 to 499.....	10,040	3,690	13,730
500 to 999.....	9,100	3,780	12,880
1,000 to 1,499.....	11,480	4,590	16,070
1,500 to 1,999.....	11,770	4,840	16,610
2,000 to 2,999.....	12,270	6,080	18,350
3,000 to 3,999.....	10,040	5,980	16,020
4,000 to 4,999.....	11,170	6,170	17,340
5,000 to 9,999.....	14,310	10,410	24,720
10,000 and more.....	24,830	13,880	38,710
All farms.....	8,770	4,110	12,880

by increased livestock numbers - have already occurred in cotton production in many hill areas of the South. An appreciable part of recent decreases in cotton acreages in the South, which have been attributed by some to cotton price supports and related acreage-control programs, can be explained as easily in terms of the dynamics of the region's farm technology and markets, including labor.

Probably the best evidence available in the study on the thesis that increased emphasis on livestock production affords one of the better ways within agriculture by which many of the South's low-income farm people can add to their farms and their incomes is information on incomes and net worth of the families grouped according to the magnitude and direction of changes they made in livestock production while under the FHA program (table 34). Most families increased both their incomes and their net worth while under the FHA program. However, the gains made increased as the families increased the size of their livestock enterprises, as measured by changes in their farm receipts from this source.

Families with increases in livestock receipts of less than \$1,000 while under the FHA program increased their incomes by an average of \$527 and added \$1,887 to their net worth. Those with increases of \$2,000 to \$3,999 in livestock receipts increased incomes by \$1,380 and net worth by \$4,344. Those who increased their livestock receipts by \$4,000 or more increased incomes by an average of \$2,467 and net worth by \$6,941. Even after increasing their family living expenses by 50 percent over expenses before entry into the FHA program, in the last year of operation under the FHA program, the latter group had \$1,806 more for savings, new investments, and payment of

debts than formerly. In much of the agriculture of the South, an average family income of \$1,806 would still represent an ambitious average income goal.

Income from nonfarm sources.--The transfer of many farm people from employment in agriculture only to employment in nearby nonfarm work while continuing to farm has increasingly affected the Nation's agricultural scene. This combination of farm and nonfarm employment has been viewed by some with considerable alarm. Others herald local industrial development to facilitate the combination of farm and nonfarm employment as one of the most promising ways of alleviating the Nation's low-income farm problem.

During the years represented in the data used for the study, the Farmers Home Administration emphasized the helping of families who planned to engage full-time in farming. In each region, however, enough families in the study sample combined farming with nonfarm work to provide a basis for limited examination of this way of increasing incomes.

In the North, families with less than \$500 of earnings from nonfarm sources had about as large total incomes as did those with earnings from nonfarm sources of \$500 to \$999 and \$1,000 to \$1,999 (table 35). Families with earnings from nonfarm sources of \$2,000 and over, however, had appreciably larger total family incomes than did those with less than \$500 of nonfarm earnings. In the West, families with less than \$500 income from nonfarm sources had a total income about as large as did those in the \$500 to \$1,999 nonfarm income classes and also as did those with nonfarm incomes of \$2,000 to \$2,999 per family. There, only as nonfarm earnings amounted to about \$3,000 or more per family did the combination

TABLE 34.--Average increase in net cash income, funds available for savings, and net worth while under program, borrowers grouped by change in value of livestock receipts while under program, the South

Change in livestock receipts per farm while under program	Net cash income			Increase in funds available for savings ¹	Net worth		
	Year before entry into program	1953	Increase		Year before entry into program	1953	Increase
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Decrease.....	1,844	2,030	186	92	5,187	6,637	1,450
Increase:							
Less than \$1,000...	1,501	2,028	527	401	4,717	6,604	1,887
\$1,000 to \$1,999...	1,738	2,732	994	754	5,728	8,788	3,060
\$2,000 to \$3,999...	1,936	3,316	1,380	990	7,494	11,838	4,344
\$4,000 and more....	2,193	4,660	2,467	1,806	9,271	16,212	6,941
All borrowers....	1,694	2,225	531	378	5,110	7,230	2,130

¹ Net cash income less family living expenses.

TABLE 35.--Average net cash income and living expenses in 1953 and average increase in income and net worth while under program, borrowers grouped by amount of off-farm income in 1953, major regions

Region, and income from nonfarm sources	Average net cash income in 1953 from--		Living expenses 1953	Average increase while under program in--	
	Farm sources	All sources		Income	Net worth
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
North:					
Less than \$500.....	2,843	2,911	1,360	1,118	4,887
\$500 to \$999.....	2,234	2,797	1,326	945	4,427
\$1,000 to \$1,999.....	2,080	3,344	1,426	1,440	4,082
\$2,000 to \$2,999.....	1,576	3,862	1,719	1,825	4,241
\$3,000 and more.....	1,755	5,357	1,937	2,931	4,982
West:					
Less than \$500.....	4,229	4,341	1,572	1,712	6,021
\$500 to \$999.....	2,267	3,014	1,482	632	4,768
\$1,000 to \$1,999.....	2,798	4,118	1,578	1,703	4,644
\$2,000 to \$2,999.....	2,163	4,448	1,713	1,713	3,927
\$3,000 and more.....	2,236	5,890	2,073	2,518	7,611
South:					
Less than \$500.....	1,950	2,032	912	434	1,953
\$500 to \$999.....	1,369	2,036	867	423	1,935
\$1,000 to \$1,999.....	1,388	2,623	1,009	761	2,519
\$2,000 to \$2,999.....	1,516	3,606	1,237	1,583	3,201
\$3,000 and more.....	2,031	5,257	1,600	2,254	9,074

of farm and nonfarm employment yield an appreciably larger total income than was received by families who depended almost entirely on farming.

This tendency for full-time farming to yield a larger income than a combination of farm and nonfarm work except when the family had a high level of nonfarm earnings or a good-paying nonfarm job, also obtained in the South. But in the South in general, incomes were lower than in either the North or the West. Hence, while families with nonfarm earnings of \$500 to \$999 had only a slightly higher average total income than did those with nonfarm earnings of less than \$500 (\$2,036 compared with \$2,032), nonfarm earnings of \$1,000 and more per family made an appreciable difference in size of total income (\$2,623 compared with \$2,032).

These findings show that among FHA borrowers in the study sample, full-time farming usually gave larger returns than a combination of farming and nonfarm work unless a good-paying nonfarm job was held. The section on economic class of farms showed that families on low-production farms¹¹ with enough nonfarm income to qualify as part-time farmers had substantially larger total incomes than did other families on low-production farms.

What matters most is not whether the family engages in full-time or part-time farming but the amount and quality of employment it has.

The combination of a low-wage nonfarm job and a small farm income will yield a higher total income than will either alone. But normally it will not yield as much income as will a good nonfarm job without the farming or as a well-equipped and well-managed farm of reasonably adequate size operated on a full-time basis.

Whether full-time or part-time farming is the better alternative can be decided only by access to information on both farm and nonfarm employment opportunities, on the skills and abilities these kinds of employment require, and on characteristics of the human resources to be employed. Both full- and part-time farming have their particular opportunities, problems and needs--financial, educational, and otherwise. On part-time farms, the objective of maximizing income from farm sources is often inconsistent with that of maximizing total income. Hence, operators of these farms often need different plans of operation, which involve different ratios of capital to land and different levels of capital and labor intensity.

Additional research is needed on the problem of combining nonfarm employment with farming to maximize the family's total income and welfare and to find ways to prevent the deterioration of farm resources that often attends shifts from full-time to part-time farming. This additional knowledge would help to reduce the risks and uncertainty faced by all credit agencies in financing these low-income farmers.

¹¹ Those with farm product sales of less than \$2,500.

CHARACTERISTICS OF FAMILIES AND FARMS BY INCOME LEVELS

Income and Capital Accumulation

Under the FHA program, the size of a family's income, as a source of savings and a credit base, affected its ability to increase its resources and its future income-earning capacity. Families with the higher incomes while under the FHA program made the larger gains in both incomes and net worth. They also had the higher levels of living.

Families who in 1953 had family incomes of \$5,000 or more, made increases in net worth while under the FHA program of \$7,430 in the North, \$8,830 in the West, and \$5,620 in the South. These same families had made substantially larger gains in annual family incomes while under the FHA program than had families in lower income classes. Those in the North with incomes of \$5,000 or more in 1953 had \$3,677 more income than before entering the FHA program; those in the West had increased their incomes by an average of \$4,544, and those in the South by an average

of \$3,860. Before entering the FHA program, these families already had substantially higher incomes than most other FHA borrowers. This higher initial income and the better resource situation associated with it, coupled with the larger credit advances that the FHA was able to make to these families, placed them in a favorable position for continuing progress in both incomes and resource situations.

Families with low incomes in 1953 made smaller increases in their net worth while under the FHA program. However, many families with incomes in 1953 of less than \$1,000 probably had abnormally low incomes. While under the FHA program, many of these families had made increases in net worth indicative of higher incomes in other years. Despite these exceptions, however, family incomes in 1953 were closely related to gains made in both incomes and net worth while under the FHA program.

Resources by Income Levels

In each of the three major geographic regions, families at the lower income levels while under the FHA program made smaller gains in their net worth than did those in the higher income groups. Too, they used their operating capital less efficiently, as evidenced by their ratio of cash farm expenses to receipts. It is probable that they also operated at a lower level of efficiency in terms of inputs of labor per dollar value of farm production.

The capital investment associated with any given income level varied from region to region. Families in the South with family incomes of less than \$1,000 had an average family income from farming of \$532 and from both farm and off-farm sources of \$669 (table 36). This compared with \$511 and \$682, respectively, for the North and with \$705 and \$794, respectively, for the West. Yet the South's families with incomes of less than \$1,000 used land and other capital resources having a total average value of \$6,966 per farm, compared with values of \$13,597 and \$17,514 in the North and West, respectively. For any given family-income level, less capital was used by families in the South than by those in the North and less was used by those in the North than by those in the West. As the income level increased, however, the differences among regions in size of investment associated with given income levels decreased considerably.

Put another way, families with access to only a small amount of capital find better employment opportunities as farm entrepreneurs in the South than they would find in either the North or West. But for a family

income of, say, \$4,500, families in the South need two-thirds to three-fourths as much, instead of only a third to half as much, capital as do families in the West and North. The smaller amounts of capital associated with any given income level in the South reflects differences among regions, especially in the respective kinds of farming, in the relative importance of capital and labor as production factors. In the South, larger inputs of labor are used with given amounts of land and working capital than in the North and West. In the West, capital is the more important element of costs.

The capital resources associated with given income levels by FHA farm-operator families provide a basis for comparisons with recent estimates of amounts of capital needed for specified incomes under average farm conditions.¹² In budgets for cotton and cotton-livestock farms in the South, it has been estimated that investments of from \$14,000 to \$27,000 would be needed in land and other capital resources before the farms would yield operator earnings of \$2,500.

Among the South's FHA borrowers in the study sample, an average investment of \$13,484 was associated with family labor earnings from farm sources of \$3,112 and with family labor earnings from all sources of \$3,925. If charges were made for family labor other than for the operator, this would yield operator earnings of about \$2,500 from farm sources alone, and of about \$3,000 from farm and non-farm sources combined. It is likely that in

¹² Brewster, *op. cit.*

TABLE 36.--Selected characteristics of families and farms of borrowers grouped by net cash income, major regions, 1953

NORTH

Item	Net cash income of--					
	Less than \$1,000	\$1,000 to \$1,999	\$2,000 to \$2,999	\$3,000 to \$3,999	\$4,000 to \$4,999	\$5,000 and more
Families.....number..	110	380	533	358	209	242
Persons per family.....do..	3.8	4.1	4.2	4.3	4.3	4.6
Average age of operator ¹years..	37	36	34	33	33	34
Land per farm.....acres..	195	189	192	192	182	215
Cropland per farm.....do..	146	122	134	143	152	194
Value per family of--						
FHA credit received.....dollars..	2,763	2,885	3,078	3,297	3,441	3,924
All farm property used.....do..	13,597	12,759	14,524	16,223	18,791	23,263
All property owned:						
Land and buildings.....do..	2,959	3,702	3,539	3,867	5,568	6,935
Working capital.....do..	5,143	5,640	6,661	7,630	8,478	10,421
Household goods.....do..	533	619	536	501	1,014	972
Total.....do..	8,635	9,961	10,736	11,998	15,060	18,328
Debts owed.....do..	1,960	2,744	2,300	2,702	3,896	4,375
Net worth.....do..	6,675	7,217	8,436	9,296	11,164	13,953
Cash receipts:						
Farm sources.....do..	2,786	3,891	5,313	6,562	7,798	12,412
Off-farm sources.....do..	171	390	489	881	1,081	1,313
Total.....do..	2,957	4,281	5,802	7,443	8,879	13,725
Cash farm expenses.....do..	2,275	2,676	3,258	3,982	4,431	7,120
Net cash income.....do..	682	1,605	2,544	3,461	4,448	6,605
Living expenses.....do..	1,041	1,129	1,350	1,491	1,716	1,876
Income left for savings.....do..	-359	476	1,194	1,970	2,732	4,729
Family's labor income ²do..	313	1,209	2,070	2,933	3,839	5,826

WEST

Families.....number..	35	88	133	110	85	165
Persons per family.....do..	3.1	3.8	4.0	4.0	4.1	4.2
Average age of operator ¹years..	47	41	38	38	37	37
Land per farm.....acres..	197	164	194	234	196	244
Cropland per farm.....do..	87	58	82	100	102	125
Value per family of--						
FHA credit received.....dollars..	2,929	3,044	3,467	4,130	4,865	5,061
All farm property used.....do..	17,514	14,898	18,621	19,745	20,416	30,054
All property owned:						
Land and buildings.....do..	9,399	6,194	8,338	9,341	8,285	14,026
Working capital.....do..	5,106	6,528	7,042	7,286	7,669	12,296
Household goods.....do..	1,291	1,166	642	1,324	660	1,303
Total.....do..	15,796	13,888	16,022	17,951	16,614	27,625
Debts owed.....do..	4,790	3,157	4,246	4,854	3,348	7,679
Net worth.....do..	11,006	10,731	11,776	13,097	13,266	19,946
Cash receipts:						
Farm sources.....do..	2,423	3,232	4,896	6,281	8,064	12,641
Off-farm sources.....do..	89	630	736	924	1,048	1,202
Total.....do..	2,512	3,862	5,632	7,205	9,112	13,843
Cash farm expenses.....do..	1,718	2,231	3,089	3,733	4,714	5,520
Net cash income.....do..	794	1,631	2,543	3,472	4,398	8,323
Living expenses.....do..	1,161	1,226	1,461	1,634	1,672	1,996
Income left for savings.....do..	-367	405	1,082	1,838	2,726	6,327
Family's labor income ²do..	211	1,057	1,875	2,766	3,642	7,204

See footnotes at end of table.

--Continued

TABLE 36.--Selected characteristics of families and farms of borrowers grouped by net cash income, major regions, 1953--Continued

SOUTH

Item	Net cash income of--					
	Less than \$1,000	\$1,000 to \$1,999	\$2,000 to \$2,999	\$3,000 to \$3,999	\$4,000 to \$4,999	\$5,000 and more
Families.....number..	628	1,080	686	403	157	154
Persons per family.....do..	4.5	4.4	4.8	4.7	5.2	4.4
Average age of operator ¹years..	46	43	41	39	39	37
Land per farm.....acres..	112	116	117	142	175	204
Cropland per farm.....do..	55	61	65	83	102	125
Value per family of--						
FHA credit received..... dollars..	1,563	1,772	2,313	2,758	3,275	4,090
All farm property used.....do..	6,966	8,247	10,556	13,501	13,484	20,974
All property owned:						
Land and buildings.....do..	2,793	3,565	4,681	5,641	6,046	7,870
Working capital.....do..	2,602	3,004	4,231	5,979	6,018	10,664
Household goods.....do..	300	813	800	743	1,118	1,205
Total.....do..	5,695	7,382	9,712	12,363	13,182	19,739
Debts owed.....do..	895	1,488	2,007	2,504	3,231	4,835
Net worth.....do..	4,800	5,894	7,705	9,859	9,951	14,904
Cash receipts:						
Farm sources.....do..	1,662	2,576	4,024	5,819	6,908	11,456
Off-farm sources.....do..	137	353	507	672	813	1,015
Total.....do..	1,799	2,929	4,531	6,491	7,721	12,471
Cash farm expenses.....do..	1,130	1,433	2,060	3,063	3,266	5,281
Net cash income.....do..	669	1,496	2,471	3,428	4,455	7,190
Living expenses.....do..	628	810	990	1,189	1,808	1,442
Income left for savings.....do..	41	686	1,481	2,239	2,647	5,148
Family's labor income ²do..	399	1,191	2,057	2,881	3,925	6,388

¹ At time of loan application.

² Net cash income minus interest charge of 6 percent on value of family's equity in farm resources. In the calculation of the family's net cash income, rent and interest paid by the family have been included in expenses.

estimates of value of investments on the FHA farms, land is somewhat undervalued, though not enough to yield a total investment in terms of current prices of more than about \$15,000. In short, under the average conditions on farms in the study sample and with the level of farming practices used by these FHA operators, an average investment of about \$15,000 in land and buildings, machinery, livestock, and other items was required to yield operator earnings from farming alone of about \$2,500, compared with estimates of from \$14,000 to \$27,000 under average farm conditions in the United States as a whole.

In the North, an average investment by FHA borrowers of close to \$20,000 was required to yield operator earnings of about \$2,500. In the West, the comparable figure was \$25,000 for \$2,500. These figures compare with estimated capital requirements under average farm conditions of around \$35,000 for a dairy farm in the North and of \$80,000 to \$90,000 for a wheat farm in the West.

Because the capital of FHA borrowers was limited (partly owing to restrictions on the amount that could be borrowed) in relation to family labor supply, labor-intensive enter-

prises were emphasized in the farming operations of the more successful borrowers. For example, one or more of such enterprises as cotton, tobacco, peanuts, vegetables, and grade A dairying, were important income sources on most southern farms in the study sample that were in the higher income classes. Many of them kept some beef cattle, but seldom as their most important farm enterprise. While many borrowers in the West raised some wheat, relatively few had a wheat type of farming.

This suggests that the capital requirements for a given size of income, instead of being constant within a farming area, may vary, depending upon a variety of conditions. These conditions include especially differences in labor supply and management and in kind of farming. Hence, many farmers are able to earn a specified family income say, of \$3,000 to \$4,000, using a much smaller amount of capital than is commonly associated with this income level.

In the South, for example, among white owner operators 30 to 49 years of age with no off-farm income, more than a fourth (26.1 percent) of those with family incomes of \$3,000

TABLE 37.--Distribution of farms within specified net cash income groups, by value of all farm resources used, white full owners 30 to 49 years of age having no off-farm income, the South, 1953

Income (dollars)	Number of farms	Distribution of farms by value of resources					
		Less than \$5,000	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$19,999	\$20,000 and more	All farms
		Percent	Percent	Percent	Percent	Percent	Percent
Less than 1,000.....	42	28.6	54.8	7.1	7.1	2.4	100.0
1,000 to 1,999.....	81	4.9	55.6	34.6	2.4	2.5	100.0
2,000 to 2,999.....	69	--	33.3	44.9	17.4	4.4	100.0
3,000 to 3,999.....	46	--	26.1	34.8	26.1	13.0	100.0
4,000 to 4,999.....	11	--	27.3	36.3	27.3	9.1	100.0
5,000 and more.....	18	--	--	61.1	5.6	33.3	100.0
Total.....	267	6.0	39.7	34.8	12.4	7.1	100.0

to \$3,999 used total farm resources having a value of less than \$10,000 (table 37). Slightly more than a third (34.8 percent) of those in this income class used farm resources worth \$10,000 to \$14,999, 26.1 percent used farm resources worth \$15,000 to \$19,999, and 13.0 percent used farm resources worth \$20,000 and over. The amount of capital used varied greatly at each of the several income levels compared. More than four-fifths (83.4 percent) of the families with incomes of less than

\$1,000 used farm resources worth less than \$10,000, but a few families in this income class used resources valued at \$20,000 or more.

It is probable that the capital requirements for a specified income have been reduced substantially among FHA borrowers as a result of the technical assistance the agency provides. In short, less capital is needed for a given income under good than under poor management.

Family Living Expenses by Income Levels

Because of the demands on income for family living, the relatively great difficulties that the lower income families have in commanding additional capital and in the struggle for competitive survival are greater than the relative incomes alone would indicate. Among families in the study sample, living expenses per family increased with increases in income though at far lower rates than did income. There is a minimum below which living expenses cannot fall without serious impairment of the family's health and labor capacity.

In each of the three regions, there were some families with minus incomes in 1953, but in each region, these families reported that annual expenses for family living averaged more than \$1,000 (table 36). In the North and West, families with incomes of less than \$1,000 had living expenses averaging \$1,041 and \$1,161, respectively. Those in the South with incomes of less than \$1,000 had living expenses of \$628 from an average family income from farm and off-farm sources of \$669 (table 36).

Income Levels and Debt-Payment Capacities

Many families in the study, particularly those with low incomes, had living expenses too near the level of their incomes for safe credit. The study showed that apparently a family income of at least \$2,000, taking account of family living expenses and making allowances for the usual contingencies of risk and uncertainty, is the minimum needed for the safe extension of credit without good collateral.

Even in the South, it would be difficult for families with incomes of less than \$2,000 to

work out a reasonably safe amortization plan for the purchase of an appreciable part of the resources they used. For example, the South's families who have family incomes of only \$1,000 to \$1,999 would require an average of 22 years to amortize a 100-percent loan at 6 percent for the resources they use. By that time, the average age of farm operators in this income class--if all were still living--would be 65 years. Many would be well beyond 75 years of age. This consideration, together with other important elements of risk

(including the fact that an average is always compounded of some cases that fall below it) would make for difficulty among these low-income families in amortizing a 100-percent loan for the purchase of farms under any kind of credit program, public or private, now in operation.

In the South, however, families with incomes of \$4,000 to \$4,999 had enough income over living expenses to amortize in 7 years a 100-percent loan, even at 6 percent interest,

for the purchase of all the farm resources they use. For families with reasonable expectations of incomes of \$4,000 to \$4,999 under recent farm-product and factor prices, credit plans could be developed for the purchase of a large part of their land and other resources. Such plans could be reasonably safe, even after making liberal allowance for price uncertainty and for other risks and uncertainties that cannot be eliminated by judicious screening of borrowers and by careful farm planning.



U.S. GOVERNMENT PRINTING OFFICE : 1959—O-515666

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